Yahoo Group Archive:
AT_Sprint (2002 — 2008)

Yahoo Group summary: AT Sprint

These Yahoo Groups messages were archived in WARC format by ArchiveTeam in 2018. This PDF was generated by Digital Library of Amateur Radio & Communications from the WARC files in 2026.

Date span: 2002-01-01 through 2008-12-31

Source WARC: at_sprint.3j9YU1Y.warc.gz

Source item: https://archive.org/details/yahoo-groups-2018-01-26T16-01-38Z-3cb13e

Messages included in this PDF: 3871

Messages omitted as spam from this PDF: 4

Yahoo replaced the domain portions of email addresses with @... in the archived messages. Characters lost in Yahoo's archived text appear as ?.

Messages are presented in ascending Yahoo message-ID order. Gaps indicate records absent from the source WARC or messages omitted from this PDF as spam.

1. Welcome All!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-08 22:42:59 UTC
From: Roland Whitsitt
Topic: 1 Message: 1

Welcome all ye AT Sprint enthusiast! I was suprised to find there wasn't already a group for this rig, so I started one. Now we have a watering hole to gather, share ideals, give the founding guru of this rig ideas, get help and to share our adventures.
Roland N5VWN/6

2. Hello to the new ATS-3 Group

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-10 19:37:10 UTC
From: n1ksn
Topic: 2 Message: 2

Hello everyone. My name is Andy N1KSN and I am an ATS-3 owner.

Funny that I got the invitation today, because just this morning I
was "town park portable" with my ATS-3. My setup:

ATS-3 at 3 watts powered by 8 AA NiMH 2500 mAh cells
Rig housed in Altoids tin
KD1JV SWR/Power meter, also in Altoids tin
Elecraft T1 autotuner
85' wire configured as inverted L, held up by two Sunnyday 20's
Three counterpoise wires, cut for 40, 30, and 20 meters

The bands were not great, but I answered a weak CQ on 14.0397 MHz and
met Brian KB9BVN, who was MOBILE with an Elecraft KX1 and a Hamstick,
also running 3 watts! I got a 459, I gave him a 569 with QSB. He
was about 350-400 miles away near Terre Haute, IN. You don't get a
contact like that everyday.

I am very pleased with the ATS-3, and am thinking about getting an
ATS-3A so I'll have two.

Later,
Andy

3. Re: Hello to the new ATS-3 Group

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-14 11:51:37 UTC
From: Roland Whitsitt
Topic: 2 Message: 3

Hi Andy, I've been thinking of getting one of those T-1 tuners. It would also go good with my 817 for "the other bands". What's your impressions of that tuner? Did you get the kit or the ready made version? Thanks for posting!
73's
Roland N5VWN/6

--- In AT_Sprint@yahoogroups.com, "n1ksn" <acpalm@...> wrote:
>
> Hello everyone. My name is Andy N1KSN and I am an ATS-3 owner.
>
> Funny that I got the invitation today, because just this morning I
> was "town park portable" with my ATS-3. My setup:
>
> ATS-3 at 3 watts powered by 8 AA NiMH 2500 mAh cells
> Rig housed in Altoids tin
> KD1JV SWR/Power meter, also in Altoids tin
> Elecraft T1 autotuner
> 85' wire configured as inverted L, held up by two Sunnyday 20's
> Three counterpoise wires, cut for 40, 30, and 20 meters
>
> The bands were not great, but I answered a weak CQ on 14.0397 MHz and
> met Brian KB9BVN, who was MOBILE with an Elecraft KX1 and a Hamstick,
> also running 3 watts! I got a 459, I gave him a 569 with QSB. He
> was about 350-400 miles away near Terre Haute, IN. You don't get a
> contact like that everyday.
>
> I am very pleased with the ATS-3, and am thinking about getting an
> ATS-3A so I'll have two.
>
> Later,
> Andy
>

4. Hi, my name is John, and I am an AT Sprint-aholic

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-14 14:28:16 UTC
From: John A. Evans - N0HJ
Topic: 4 Message: 4

Greetings All,

I own an ATS (Mark I?) that has been my primary backpacking rig for some time. I built the rig and a tuner into a pencil box, which also stores some accessories. I also owned an ATS-2 but never assembled it, finally selling it because I wasn't happy with the packaging/interface. I also own an ATS-3 that I am about to assemble and I will most likely buy an ATS-3A.

The current plan is to build the ATS-3(a) into a case made of two metal pencil cases. I've epoxied the two pencil cases bottom to bottom and will house the ATS-3 into the top left portion, antenna tuner into the top right portion (perhaps with part of the tuner recessed into the bottom as well). The bottom will house batteries. Both top and bottom should also house accessories as well. At any rate, I will mount the pushbuttons on the opposite side of the ATS-3 board as instruction so that there is no need for access the ATS-3 from both sides - this is just the way I prefer.

I haven't decided on a tuner yet but am looking at the ALT as well as the Fuchs Antenna Tuner. If I get to it, I will post a picture of the tin setup.

72 - john - n0hj

5. Re: [AT_Sprint] Re: T1 evaluation

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-14 14:44:32 UTC
From: Michael Harnage
Topic: 2 Message: 5

Hi Roland,

Well, I am not Andy but I do have the T1 (as well as several ATS rigs). Bought a T1 kit early on and have been using it ever since. It matches quicker than my KAT2 in my K2 (it is an older K2 so that may explain why). I don't see how they can sell the built T1 for what they do -- it is an absolute bargain. Either kit or built you won't go wrong.

73 de w1mt
mike

--- Roland Whitsitt <n5vwn@...> wrote:

> Hi Andy, I've been thinking of getting one of those
> T-1 tuners. It
> would also go good with my 817 for "the other
> bands". What's your
> impressions of that tuner? Did you get the kit or
> the ready made
> version? Thanks for posting!
> 73's
> Roland N5VWN/6
>
> --- In AT_Sprint@yahoogroups.com, "n1ksn"
> <acpalm@...> wrote:
> >
> > Hello everyone. My name is Andy N1KSN and I am an
> ATS-3 owner.
> >
> > Funny that I got the invitation today, because
> just this morning I
> > was "town park portable" with my ATS-3. My setup:
> >
> > ATS-3 at 3 watts powered by 8 AA NiMH 2500 mAh
> cells
> > Rig housed in Altoids tin
> > KD1JV SWR/Power meter, also in Altoids tin
> > Elecraft T1 autotuner
> > 85' wire configured as inverted L, held up by two
> Sunnyday 20's
> > Three counterpoise wires, cut for 40, 30, and 20
> meters
> >
> > The bands were not great, but I answered a weak CQ

> on 14.0397 MHz
> and
> > met Brian KB9BVN, who was MOBILE with an Elecraft
> KX1 and a
> Hamstick,
> > also running 3 watts! I got a 459, I gave him a
> 569 with QSB. He
> > was about 350-400 miles away near Terre Haute, IN.
> You don't get
> a
> > contact like that everyday.
> >
> > I am very pleased with the ATS-3, and am thinking
> about getting an
> > ATS-3A so I'll have two.
> >
> > Later,
> > Andy
> >
>
>
>
>
>
>
>
> ---------- Yahoo! Groups Sponsor
> ----------~-->
> Home is just a click away. Make Yahoo! your home
> page now.
>
http://us.click.yahoo.com/DHchtC/3FxNAA/yQLSAA/ELTolB/TM
>
---~->
>
>
>
> Yahoo! Groups Links
>
>
> AT_Sprint-unsubscribe@yahoogroups.com
>
>
>
>
>

Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around

http://mail.yahoo.com

6. NK0E checking in

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-14 14:51:53 UTC
From: David Ek
Topic: 6 Message: 6

Thanks to Roland N5VWN for starting up this group. Thought I'd check in. I'm Dave NK0E and I built and own an ATS-II. I'm somewhat chagrined to admit I haven't actually put it on the air yet, other than for testing. I haven't actually put much of anything on the air lately because my shack is mostly packed up and in storage right now while I complete a couple of moves after having gotten married a couple of months ago.

My ATS-II will see mostly portable operation with my Elecraft T1 and probably a half-size G5RV that I drag around with me.

One suggestion would be for someone to upload info to the AT_Sprint group home page on the firmware enhancements that one of the QRP-L members made for the ATS-II and ATS-III, along with some information on how to reprogram existing rigs. I have that stuff someplace, but right now I'm on the road traveling and don't have any access to that stuff. I'll do it if I get a chance once I have some time back at home again.

73,

Dave NK0E

7. Re: [AT_Sprint] NK0E checking in

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-14 15:21:53 UTC
From: Michael Harnage
Topic: 6 Message: 7

Hi Dave,

Hope you get that ATS2 on the air soon.

For the firmware modifications, please check out my
website (yeah, I'm the guy) at:

<http://w1mt.qrpradio.com> or more specifically:

<http://w1mt.qrpradio.com/ats3.html>

Btw, a little pre announcement for you guys on this
list, I will be releasing a new version of firmware
that includes scanning capability in the near future.
It will also allow you to change the sidetone/BFO but
only if you have done the NR4E IF filter modifications
as well.

For those who don't know, the firmware mods I have
made support the ATS2, ATS3 and soon the ATS3A. (The
original ATS used a different mpu and thus is not
supported by my firmware mods.)

If someone wants to put a link on the AT_SPRINT page
to my homepage that would be fine, but because the
information is subject to change please don't copy the
site.

73 de w1mt
Mike

--- David Ek <david.ek@...> wrote:

> One suggestion would be for someone to upload info
> to the AT_Sprint group home page on the firmware
> enhancements that one of the QRP-L members made for
> the ATS-II and ATS-III, along with some information
> on how to reprogram existing rigs. I have that stuff
> someplace, but right now I'm on the road traveling
> and don't have any access to that stuff. I'll do it
> if I get a chance once I have some time back at home
> again.
>

Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

8. T1 evaluation and stealth ops

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-14 15:31:32 UTC
From: Roland Whitsitt
Topic: 8 Message: 8

Micheal,
Well that cinches it then, I'll sneak in an order for it under the XYL's radar. I've been impressed with my K2's tuner so if the T-1 is better, I'm in. I'm looking for something quick and easy for those times at work on graveyard shift or any shift I can sneak away for stealth operations! I've got a place where I've thrown a wire off a gangplank between two tanks at about 50 feet. I was trying out a friend's kx1 and got someone in Indiana from Californy. On his qsl card the OM said, "I've worked weaker sigs, but not many!" hi hi I was running 4 watts in about 20 feet of wire hanging down and counterpoised on an aluminum railing. So I was happy. I like the kx1 but money dictates another direction. Plus, the ats3a is just one of those things "I have to have!" Like many of us here, I like lots of the neat rigs out there. I even like the idea of making simple tube rigs on a piece of board. But that's something for another forum. Sorry, I do rattle on sometimes.
73's Roland N5VWN/6
in Californy
----- Original Message -----
From: Michael Harnage
To: AT_Sprint@yahoogroups.com
Sent: Wednesday, June 14, 2006 7:44 AM
Subject: Re: [AT_Sprint] Re: T1 evaluation

Hi Roland,

Well, I am not Andy but I do have the T1 (as well as
several ATS rigs). Bought a T1 kit early on and have
been using it ever since. It matches quicker than my
KAT2 in my K2 (it is an older K2 so that may explain
why). I don't see how they can sell the built T1 for
what they do -- it is an absolute bargain. Either kit
or built you won't go wrong.

73 de w1mt
mike

--- Roland Whitsitt <n5vwn@...> wrote:

> Hi Andy, I've been thinking of getting one of those
> T-1 tuners. It
> would also go good with my 817 for "the other
> bands". What's your
> impressions of that tuner? Did you get the kit or
> the ready made
> version? Thanks for posting!
> 73's
> Roland N5VWN/6
>
> --- In AT_Sprint@yahoogroups.com, "n1ksn"

> <acpalm@...> wrote:
> >
> > Hello everyone. My name is Andy N1KSN and I am an
> ATS-3 owner.
> >
> > Funny that I got the invitation today, because
> just this morning I
> > was "town park portable" with my ATS-3. My setup:
> >
> > ATS-3 at 3 watts powered by 8 AA NiMH 2500 mAh
> cells
> > Rig housed in Altoids tin
> > KD1JV SWR/Power meter, also in Altoids tin
> > Elecraft T1 autotuner
> > 85' wire configured as inverted L, held up by two
> Sunnyday 20's
> > Three counterpoise wires, cut for 40, 30, and 20
> meters
> >
> > The bands were not great, but I answered a weak CQ
> on 14.0397 MHz
> and
> > met Brian KB9BVN, who was MOBILE with an Elecraft
> KX1 and a
> Hamstick,
> > also running 3 watts! I got a 459, I gave him a
> 569 with QSB. He
> > was about 350-400 miles away near Terre Haute, IN.
> You don't get
> a
> > contact like that everyday.
> >
> > I am very pleased with the ATS-3, and am thinking
> about getting an
> > ATS-3A so I'll have two.
> >
> > Later,
> > Andy
> >
>
>
>
>
>
>
>
> ------------------------ Yahoo! Groups Sponsor
> ----------------------~-->
> Home is just a click away. Make Yahoo! your home
> page now.

>
http://us.click.yahoo.com/DHchtC/3FxNAA/yQLSAA/ELTolB/TM
>
--~->
>
>
>
> Yahoo! Groups Links
>
>
> AT_Sprint-unsubscribe@yahoogroups.com
>
>
>
>
>

_____
Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

9. Dual Tin photos now online

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-14 16:22:44 UTC
From: John A. Evans - N0HJ
Topic: 8 Message: 9

Greetings,

I've posted a few shots of my project tin for the ATS-3 - I hope to get everything in this tin except for my antenna wire and titanium clipboard. I'll add photos as the project progresses.

72 - john - n0hj

10. Re: Dual Tin photos now online

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-14 17:21:23 UTC
From: fixnwrtr
Topic: 8 Message: 10

About time you got this one off the shelf. Looks good.

73 - Jackie AC0CA

--- In AT_Sprint@yahoogroups.com, "John A. Evans - N0HJ" <jaevans@...>
wrote:
>
> Greetings,
>
> I've posted a few shots of my project tin for the ATS-3 - I hope to
> get everything in this tin except for my antenna wire and titanium
> clipboard. I'll add photos as the project progresses.
>
> 72 - john - n0hj
>

11. membership changed all of a sudden?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-14 17:34:39 UTC
From: John A. Evans - N0HJ
Topic: 11 Message: 11

Looks like I may have gotten the boot

john

12. Re: [AT_Sprint] membership changed all of a sudden?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-14 17:46:52 UTC
From: John A. Evans - N0HJ
Topic: 11 Message: 12

OK, I think I know what happened. Beware - do NOT forward the original invite to others who may be interested in the group - if they click on the link, the possibility exists that your email will then be associated with someone else's Yahoo ID.

Please forgive me, for I have sinned.

72 - john - n0hj

13. ATS Envy

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-15 12:21:29 UTC
From: SteveG /Monument, CO
Topic: 13 Message: 13

Fellow ATS'ers,

Steve/n0tu here. I've been eyeing Steve's ATS for a few years now while using my KX1 for trips to the woods. I guess I was put off by the lack of a tuning KNOB. Recently had the opportunity to 'trail' test an original ATS via John/n0hj. I loved it! Who needs the knob anyway? When a button will do! I especially like ATS's 4-pole verses the KX1's 3-pole!

So, I've jumped in w/both feet and ordered a ATS3a. as you can guess I'm impatiently waiting for shipment. As far as ATUs -I've several homebrew LC wire tuners & ZM2. ATS packaging remains a creative option at the moment. Glad to find ATS kindred spirits forum!

Steve/n0tu
www.angelfire.com/planet/goatman

14. Re: [AT_Sprint] ATS Envy

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-15 12:45:47 UTC
From: Jeffrey Embry
Topic: 13 Message: 14

Steve,

I too am waiting for the 2 ATS3A's that I have ordered. One for me and one for a friend...who does SMT work for a living. He is going to teach me how to do this work better than I have in the past. I also have the KX-1 and have been having a blast with it and plan on taking it for a trip on Saturday to celebrate International QRP Day.

I also had a chance to play with a couple of ATS2's and found the receiver to be very hot...and after a short learning curve to figure out the switches it wasn't bad at all.

KD1JV does a fine job of kitting these things. I have yet to decide what type of enclosure to use...but there is time for that. My concern is the creation of the holes in a tin such as an Altoids tin without distorting the metal...any suggestions.

72,

--
Jeff Embry, K3OQ
FM19je
ARCI #11643
FPQRP #-696
NAQCC #25
AMSAT LM-2263

No trees were harmed in the sending of this message, however a large number of electrons were terribly inconvenienced.

On 6/15/06, SteveG /Monument, CO <n0tu.qrp@...> wrote:
> Fellow ATS'ers,
>
> Steve/n0tu here. I've been eyeing Steve's ATS for a few years now
> while using my KX1 for trips to the woods. I guess I was put off by
> the lack of a tuning KNOB. Recently had the opportunity to 'trail'
> test an original ATS via John/n0hj. I loved it! Who needs the knob
> anyway? When a button will do! I especially like ATS's 4-pole verses
> the KX1's 3-pole!
>
> So, I've jumped in w/both feet and ordered a ATS3a. as you can guess
> I'm impatiently waiting for shipment. As far as ATUs -I've several
> homebrew LC wire tuners & ZM2. ATS packaging remains a creative option
> at the moment. Glad to find ATS kindred spirits forum!
>
> Steve/n0tu
> www.angelfire.com/planet/goatman

>
>
>
>
>
>
>
>
> Yahoo! Groups Links
>
>
>
>
>
>
>

15. Re: [AT_Sprint] ATS Envy

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-15 13:15:53 UTC
From: Michael Harnage
Topic: 13 Message: 15

Hi Jeff,

Suggest you use a step bit (also called unibit) and go
slow. These bits work great for altoids tin type hole
making.

73 de w1mt
mike

--- Jeffrey Embry <jeffrey.embry@...> wrote:

> My
> concern is the creation of the holes in a tin such
> as an Altoids tin
> without distorting the metal...any suggestions.

_____
Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

16. Re: [AT_Sprint] ATS Envy

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-15 13:20:02 UTC
From: Jeffrey Embry
Topic: 13 Message: 16

Thanks...I think I saw some of those at Harbor Freight the other day.
Will check on after work.

- Jeff -

On 6/15/06, Michael Harnage <w1mt@...> wrote:
> Hi Jeff,
>
> Suggest you use a step bit (also called unibit) and go
> slow. These bits work great for altoids tin type hole
> making.
>
> 73 de w1mt
> mike
>
> --- Jeffrey Embry <jeffrey.embry@...> wrote:
>
> > My
> > concern is the creation of the holes in a tin such
> > as an Altoids tin
> > without distorting the metal...any suggestions.
>
>
> _____
> Do You Yahoo!?
> Tired of spam? Yahoo! Mail has the best spam protection around
> http://mail.yahoo.com
>
>
>
>
> Yahoo! Groups Links
>
>
>
>
>
>
>

--
Jeff Embry, K3OQ
FM19je
ARCI #11643
FPQRP #-696
NAQCC #25

AMSAT LM-2263

No trees were harmed in the sending of this message, however a large number of electrons were terribly inconvenienced.

17. Re: [AT_Sprint] ATS Envy

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-15 14:14:55 UTC
From: Jeffrey Embry
Topic: 13 Message: 17

Another question...are there any drilling templates available for the
altoids tins?

Thanks again,

- Jeff -

On 6/15/06, Michael Harnage <w1mt@...> wrote:
> Hi Jeff,
>
> Suggest you use a step bit (also called unibit) and go
> slow. These bits work great for altoids tin type hole
> making.
>
> 73 de w1mt
> mike
>
> --- Jeffrey Embry <jeffrey.embry@...> wrote:
>
> > My
> > concern is the creation of the holes in a tin such
> > as an Altoids tin
> > without distorting the metal...any suggestions.
>
>
> _____
> Do You Yahoo!?
> Tired of spam? Yahoo! Mail has the best spam protection around
> http://mail.yahoo.com
>
>
>
>
> Yahoo! Groups Links
>
>
>
>
>
>
>

--
Jeff Embry, K3OQ
FM19je
ARCI #11643

FPQRP #-696
NAQCC #25
AMSAT LM-2263

No trees were harmed in the sending of this message, however a large number of electrons were terribly inconvenienced.

18. Re: ATS Envy

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-15 14:28:14 UTC
From: Steve/n0tu
Topic: 13 Message: 18

> Another question...are there any drilling templates available for the
> altoids tins?
>
> Thanks again,
>
> - Jeff -

There's one in the ATS manual PDF on Steve's web. (don't know p#?)

Steve/n0tu

19. Re: [AT_Sprint] ATS Envy

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-15 14:34:19 UTC
From: Gil Stacy
Topic: 13 Message: 19
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

20. Re: [AT_Sprint] ATS Envy

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-15 14:36:24 UTC
From: Michael Harnage
Topic: 13 Message: 20

Yes, the manual you get with the rig will have a
template in it. If you can figure out how to get your
printer to print the image and not let it (the
printer) do any resizing you are good to go.

73 de w1mt
mike

--- Jeffrey Embry <jeffrey.embry@...> wrote:

> Another question...are there any drilling templates
> available for the
> altoids tins?
>
> Thanks again,
>
> - Jeff -
>
> On 6/15/06, Michael Harnage <w1mt@...> wrote:
> > Hi Jeff,
> >
> > Suggest you use a step bit (also called unibit)
> and go
> > slow. These bits work great for altoids tin type
> hole
> > making.
> >
> > 73 de w1mt
> > mike
> >
> > --- Jeffrey Embry <jeffrey.embry@...> wrote:
> >
> > > My
> > > concern is the creation of the holes in a tin
> such
> > > as an Altoids tin
> > > without distorting the metal...any suggestions.
> >
> >
> > _____
> > Do You Yahoo!?
> > Tired of spam? Yahoo! Mail has the best spam
> protection around
> > http://mail.yahoo.com
> >
> >

> >
> >
> > Yahoo! Groups Links
> >
> >
> >
> >
> >
> >
> >
>
>
> --
> Jeff Embry, K3OQ
> FM19je
> ARCI #11643
> FPQRP #-696
> NAQCC #25
> AMSAT LM-2263
>
> No trees were harmed in the sending of this message,
> however a large
> number of electrons were terribly inconvenienced.
>
>
> ------------------------ Yahoo! Groups Sponsor
> ----------------------~-->
> See what's inside the new Yahoo! Groups email.
>
http://us.click.yahoo.com/2pRQfA/bOaOAA/yQLSAA/ELTolB/TM
>
---~->
>
>
>
> Yahoo! Groups Links
>
>
> AT_Sprint-unsubscribe@yahoogroups.com
>
>
>
>
>

_____
Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

21. My story (very long history of man story!)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-16 15:22:13 UTC
From: Roland Whitsitt
Topic: 21 Message: 21

The ATS3a is due for release in 3 days! Just in time for field day? I doubt it. But that's okay. My friends are making me do qro this year. At least we will be in Lake Tahoe! Hope to work you guys.
Last year my k2 was still in assembly and I was dead in the water trying to find a poor solder joint. For SKN night I had the k2 but after a couple of contacts with a SW+ couldn't get anybody qrp and not even with the k2 at 15 watts. Ended up using an aging DX70 alinco that's seen to much marine use. Now at least I've got the k2 upgraded to 100 watts for "those days" when I want to operate no matter the band conditions. Also got a really beautiful Spanish Llaves straight key instead of my $8.00 one for SKN or whenever the mood hits.
Lately I've been using the SW+ a lot with a fcc-1 digital readout.
Now for the confession. I don't yet have an ATS yet. I gleaned the internet on this rig. I was between the kx1 and the ats3. My XYL was balking at the expense of the kx1 and to be honest, not having that 5th watt put me off. I want every watt I can get and still be considered qrp. I sure like the packaging for the kx1 though.
Anyways, not only the 5 watts but the total band coverage is what sold me on the ats3. Of course there is the "neat" factor with the ATS.
When I built the k2, I had a support group. I didn't see that here, (I did not yet know about the qrp-l group). Now, I've got a group to help me through the project. I have built a small kit from Steve before. I built the audio filter for the rockmite. The rockmite was fine, but sometimes was just to much a challange and I wanted to have a bit more of a qso. Was cool getting a rockmite to rockmite contact though.
So now everything is in place. The hamshack is straightend up for the next project. I've got my doofis tool made and ready for action. The support group is here. The kit is just about ready to be shipped out and Steve had my check in hand about the time this site when live.
I'm sure if I get the ats going, it will be my main rig for quite some time. I say that because I found myself using the SW+ most of the time before, with the ft817, k2, rockmite sitting idle. BTW, I had my SW+ running 5 watts.
I was going to go ahead and get the T-1 tuner but now have decided to wait and see how the ats3a comes along. In the mean time I can use the norcal blt tuner for 40/30/20. I guess you can tell by now I'm into building kits! I've never been able to make any of Dan's small parts kits to work, and I have them all. And every one of his kits had missing parts. But he was prompt. Still have the little joe for 10 meters I haven't built. Going to try and make a 10 meter beacon with that using my norcal keyer.
Let me back up to the beginning. My first attempt at kit building was the dreaded pixie II. I never could get a random contact with that rig, only a prearranged one. My friend got one from a guy 70 miles

away. He got his qso on the second call! I tried for a couple of weeks. And now I've evolved to the ats. Hope nobody is put off that I started this group and don't even have the rig in hand. I'm already a fan. And I wanted a group here for others to find easily. I'll be attentive to this site as I want it to grow. I'm sure it will be a help to builders and free up Steve so he can work on other neat projects down the road. BTW, I'd pay even more for a higher band version. I've been hearing beacons on 10 meters quite a bit lately. My favorite band! As time goes on, and I see who is helping others a lot and level headed, I'll make a couple of other moderators. If and when Steve Weber joins us, he get's instant moderator rights and since this is really his puppy, he can have ownership if he wishes.
Right now, there are no rules other than to behave. Pretty much common sense. Steve has the power to disolve this group anytime. Although anyone can start another one. Hard to put out a wild fire!
Hope you enjoyed the novel. I'm looking forward to writing all my future adventures about the ATS3a someday. Already daydreaming about it!
73's and happy coming field day
Roland N5VWN

22. Re: [AT_Sprint] My story (very long history of man story!)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-16 15:44:05 UTC
From: Michael Harnage
Topic: 21 Message: 22

Thanks for starting the group Roland! Long needed. You
will enjoy the ATS once you get it built and on the
air.

Comment about putting higher bands and ATS rigs. Steve
uses the DDS to directly turn on and off the 2n7000
finals (essentially using a square wave) -- as such it
can't go higher than the DDS chip can generate which
is in theory about 50MHz divided by 3 or 16.6MHz. The
ATS2 and ATS3 use 40MHz oscillators so it is a small
stretch for 20M on those rigs but it is close enough
to not worry about. I for one am glad he chose a 50MHz
osc for the ATS3A. With a little firmware change the
older rigs could be fitted with a 50MHz oscillator, if
wanted.

The DDS chip in the ATS rigs (AD9834) could be used on
higher bands if the transmitter part of the rig were
revamped a little. A frequency doubler in the right
spot could make this work. Have a look at the KX1
schematics compared to the ATS rigs and you will see
the transmitter differences. Steve really hit upon
something slick when he put this puppy together.

Btw, I am down to 1 ATS rig in house. Anticipating
arrival of the 3A.

73 de w1mt
mike

--- Roland Whitsitt <n5vwn@...> wrote:
> BTW, I'd pay even more for
> a higher band
> version. I've been hearing beacons on 10 meters
> quite a bit lately.
> My favorite band!

_____
Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

23. Re: [AT_Sprint] My story (very long history of man story!)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-16 15:54:38 UTC
From: Jeffrey Embry
Topic: 21 Message: 23

Ditto on Mike's remarks Roland. I don't own an ATS yet...but after playing with one, I ordered two from Steve. One for myself and one for a friend. The theory here being that he can teach me a bit about working with SMT...and hopefully he will be back on the air after not being on the air in about 20 years.

I am looking forward to the project and have ordered a DK9SQ fishing pole antenna from WA3WSJ.com for it. They both should arrive at about the same time.

Thanks for starting the group. Lets try and keep it going and share as much as we can with one another.

72,

--
Jeff Embry, K3OQ
FM19je
ARCI #11643
FPQRP #-696
NAQCC #25
AMSAT LM-2263

No trees were harmed in the sending of this message, however a large number of electrons were terribly inconvenienced.

On 6/16/06, Michael Harnage <w1mt@...> wrote:
> Thanks for starting the group Roland! Long needed. You
> will enjoy the ATS once you get it built and on the
> air.
>
> Comment about putting higher bands and ATS rigs. Steve
> uses the DDS to directly turn on and off the 2n7000
> finals (essentially using a square wave) -- as such it
> can't go higher than the DDS chip can generate which
> is in theory about 50MHz divided by 3 or 16.6MHz. The
> ATS2 and ATS3 use 40MHz oscillators so it is a small
> stretch for 20M on those rigs but it is close enough
> to not worry about. I for one am glad he chose a 50MHz
> osc for the ATS3A. With a little firmware change the
> older rigs could be fitted with a 50MHz oscillator, if
> wanted.
>
> The DDS chip in the ATS rigs (AD9834) could be used on
> higher bands if the transmitter part of the rig were
> revamped a little. A frequency doubler in the right

> spot could make this work. Have a look at the KX1
> schematics compared to the ATS rigs and you will see
> the transmitter differences. Steve really hit upon
> something slick when he put this puppy together.
>
> Btw, I am down to 1 ATS rig in house. Anticipating
> arrival of the 3A.
>
> 73 de w1mt
> mike
>
> --- Roland Whitsitt <n5vwn@...> wrote:
> > BTW, I'd pay even more for
> > a higher band
> > version. I've been hearing beacons on 10 meters
> > quite a bit lately.
> > My favorite band!
>
> _____
> Do You Yahoo!?
> Tired of spam? Yahoo! Mail has the best spam protection around
> http://mail.yahoo.com
>
>
>
>
> Yahoo! Groups Links
>
>
>
>
>
>
>

24. ATS 3 output

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-16 16:57:36 UTC
From: ron
Topic: 24 Message: 24

I get only 2.5 watts out with my ATS 3. It is
touted as being a 5 watter.

Anything I need to do to meet that or at least 4.5??

Ron, wb1hga

25. Re: [AT_Sprint] ATS 3 output

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-16 17:03:14 UTC
From: Michael Harnage
Topic: 24 Message: 25

What are you measuring with/ and how? What is your
power supply voltage?

mike/w1mt

--- ron <roncasa@...> wrote:

> I get only 2.5 watts out with my ATS 3. It is
> touted as being a 5 watter.
>
> Anything I need to do to meet that or at least 4.5??
>
> Ron, wb1hga
>
>
> ------------------------ Yahoo! Groups Sponsor
> ----------------------~-->
> Check out the new improvements in Yahoo! Groups
> email.
>
http://us.click.yahoo.com/6pRQfA/fOaOAA/yQLSAA/ELTolB/TM
>
---~->
>
>
>
> Yahoo! Groups Links
>
>
> AT_Sprint-unsubscribe@yahoogroups.com
>
>
>
>
>

Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

26. Re: [AT_Sprint] ATS 3 output

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-16 17:18:45 UTC
From: jaevans@pcisys.net
Topic: 24 Message: 26

Wasn't there an issue with the 2n7000's and shorting of the leads to ground due to the transistor being forced into the mounting holes?? I can't recall if this was with the original ATS or the -2, or -3. Might look for hair-like shavings off the main leads.

72 - john - n0hj

This message was sent using Endymion MailMan.
http://www.endymion.com/products/mailman/

27. Re: [AT_Sprint] ATS 3 output

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-16 18:26:55 UTC
From: ron
Topic: 24 Message: 27

My trusty Yaesu YP 150. Full deflection at 6 watts.
No question to it's accuracy.

12 VDC

Michael Harnage wrote:
> What are you measuring with/ and how? What is your
> power supply voltage?
>

28. Re: [AT_Sprint] ATS 3 output

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-16 18:49:59 UTC
From: Michael Harnage
Topic: 24 Message: 28

Good.

Next make sure that the rig's power source is 12v and
does not drop when transmitting. Then, as another
poster said, visually check around the 2n7000's to
make sure that there are no shorts. Also, check the
voltages around Q5 and make sure everything is as
expected there.

Btw, my rigs have always gotton somewhat under 5w (4.4
to 4.8) depending on band.

Steve once told me that he really designed the rig to
put out 2.5 watts at 9v. So if I get reasonably close
to that spec, I don't worry too much about power at
12v. (Normally I don't run mine over 11.1v anyway -- a
3 cell lipo battery).

mike

--- ron <roncasa@...> wrote:

> My trusty Yaesu YP 150. Full deflection at 6 watts.
> No question to it's accuracy.
>
> 12 VDC
>
> Michael Harnage wrote:
> > What are you measuring with/ and how? What is your
> > power supply voltage?
> >
>
>
>
> ---------- Yahoo! Groups Sponsor
> ----------~-->
> Great things are happening at Yahoo! Groups. See
> the new email design.
>
http://us.click.yahoo.com/TISQkA/hOaOAA/yQLSAA/ELTolB/TM
>
---~->
>
>
>
> Yahoo! Groups Links

>
>
> AT_Sprint-unsubscribe@yahoogroups.com
>
>
>
>
>
>

Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

29. It's okay to sell stuff or offer building services here

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-16 21:46:23 UTC
From: Roland Whitsitt
Topic: 29 Message: 29

Thought I'd mention that. It's not been a problem on the elecraft list or other list I've seen. So if you got a Sprint or any radio gear you would like to sell, feel free to offer it here. Also, some folks like certain rigs but don't have the sharp eyes (and this rig stretches THAT point!) or steady hands. So it's okay to offer building services. Seems to me that this rig is ideal for even blind hams. . .as far as operating.
73's Roland N5VWN

30. ATS-3 in Korea

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-16 23:13:39 UTC
From: n4eo
Topic: 30 Message: 30

My ATS-3 is with me in HL9 land.
I'm at Yongsan, in central Seoul at the HQ of the 8th Army
and the 121 General Hospital, where I am TDY for 54 days.
I will be attempting to get license here early next week.
I hear a ham works in S-3, where such things are done.
I will be attempting to load a wire dropped out of 9th floor
window at the Dragon Hill Lodge (on post) and tuned with the
ALT tuner (www.qrpkits.com) and running about 3 watts.
I forgot my paddles so I am looking for a ham store,
but no luck in making contact with anyone on the ground
who has such knowledge yet.
With 6 millions souls in Seoul, I'm sure to find a paddle!
72,
Jerry N4EO/KH6, now HL9?? I hope.

31. Re: ATS-3 in Korea

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-17 00:48:07 UTC
From: Steve/n0tu
Topic: 30 Message: 31

> With 6 millions souls in Seoul, I'm sure to find a paddle!
> 72,
> Jerry N4EO/KH6, now HL9?? I hope.

Good luck Jerry on the piece of paper making it legal to launch a signal! Hope you find a paddle!! If not I'm sure someone here would be willing to ship you one! Steve/n0tu

32. Re: doofis tool ? (was very long but now a short Q?!)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-17 01:02:18 UTC
From: Steve/n0tu
Topic: 21 Message: 32

> So now everything is in place. The hamshack is straightend up for
>the next project. I've got my doofis tool made and ready for action.
>The support group is here.

So what's the doofis tool? Am I a doofis if I try to build my ATS3a with out or with one? How important is the doofis factor when it comes to ATS build? Are there any side effects from using the tool? Like droopy solder iron tip or limp solder syndrom? Undale to flux properly? Please advise! Steve/n0tu

33. Re: [AT_Sprint] Re: doofis tool ? (was very long but now a short Q?!)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-17 01:53:50 UTC
From: Gil Stacy
Topic: 21 Message: 33
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

34. Re: [AT_Sprint] Re: doofis tool ? (was very long but now a short Q?!)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-17 03:30:53 UTC
From: Michael Harnage
Topic: 21 Message: 34

Ha! I resemble that remark. Actually, I did use my
fingernail on the first ATS I built. Have since
"graduated" to tweezers. Found a nice set at Harbor
Freight and they have worked great for me. The one
that has an almost 90 degree bend at the end works
well for me.

73 de w1mt
mike

--- Gil Stacy <gilstacy@...> wrote:

> Doofis tool holds down parts so that both hands are
> free to solder. W1MT is
> so "grizzled" he doesn't use one. ;) He holds down
> with his thumb nail.
> Gil NN4CW
>
>

Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

35. Re: My story (very long history of man story!)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-17 14:13:55 UTC
From: fixnwrtr
Topic: 21 Message: 35

"Hope nobody is put off that I started this group and don't even have the rig in hand."

Since I'm new to all of this and don't have an ATS but plan to have one, I certainly don't mind. I hope to learn from all of you experienced and knowledgeable ATS users and would like to find someone locally to help me with assembling and using my ATS when I get it.

72,
Jackie
AC0CA

36. Building a graphite enclosure and a doofus with photos

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-17 16:24:38 UTC
From: nn4cw
Topic: 36 Message: 36

Folks,
I just uploaded photos of my lightweight ATS3, Skinny Minnie, and a photo of my doofus. My doofus is made from a coathanger, fishing weight, toothpick and wine cork. The wire is bent back after passing through the cork and hooked back into the cork to hold it vertical.

She's dressed in silk and carbon fiber veneer. Full station weight with the 7.4V 300 mAh lipo is .143 lbs. running 2+ watts. With the 11.1V 300 mAh lipo, she's at .160 lbs. and 5 watts out. These weights are with 40 and 80 meter front end boards, respective battery, single earbud and straight key. I used the matt finish Dragonplate which is $18.00 from www.dragonplate.com for a 6 x 12" piece. The 6 x 6" piece which is sold for under $10 would have been more than adequate. The connectors are JST for antenna and power; no jacks are on the board for single earbud or key which are direct wired. Compared with 1/8" balsa that W1MT uses in his lite rig, the Dragonplate veneer is 15% lighter. I used less than a third of the piece in the project. The veneer thickness is all you need for the ATS3. It is tough stuff but easy to work with. I cut it with sharp scissors, evened edges with sandpaper, and glued it up with 5 minute Z-poxy which I use for fly tying and costs $10 for 4 ozs. It lasts for years in its two 2 oz. squeeze bottles of resin and hardener. (Don't waste your money on the 5 minute epoxy that comes in those messy, hardly reusable twin plungers. For purposes of this project, you do not need to buy the expensive epoxy recommended by Dragonplate.) I tightly covered the ATS3 board's edges with masking tape before epoxying the sides directly to the board. No epoxy touches it so that one can easily strip off the dragonplate and rebuild the radio later should one desire. Mounting the sides directly to the board contributes to the stiffness to the enclosure. The finished enclosure is plenty stout.

After the epoxy set up after putting on the sides, I squared everything with masking tape on the outside corner edges. Silk is the strongest, lightest natural fiber. I then made a tape out of silk soaked in epoxy which I applied into the corners and forced into shape with a toothpick. The masking tape on the corners also prevented epoxy seepage to the outside, keeping everything relatively neat. When the epoxy set, I added small strips of Dragonplate to form triangles with the corners to support the top piece of Dragonplate. For the bottom, I printed out page 24 of Steve's instructions and with masking tape, fastened .1" wide strips of Dragonplate just inside the board template on page 24. I fastened the strips together with short pieces of Dragonplate and epoxy at the corners. The silk was fastened to the frame with a

glue stick and then epoxy. I pressed the frame and silk between two sandwich bags until it cured. The finished bottom has enough flex to wedge itself in place in the bottom of the enclosure. The straight key was made from a piece of a flyrod tip and .125" hollow graphite (carbon fiber) rod from Dragonplate. A 40" piece cost $4.50.

The two pieces of tube are fastened to the front of the key with epoxy and a strip of silk. The tubes are separated by 1/32" thick birch plywood. The silk used through out project is from an old necktie. I didn't have the heart to mount the ugly ole' key on top of the radio. The Dragonplate has an interesting look and changes appearance when viewed from different angles. I made all but the largest of the holes in it with the tip of an Exacto Knife used like an awl.

[note: since writing the above description, station wgt. has reduced significantly with 250 mAh batteries.]

72/73, Gil NN4CW

37. Operation from steel building

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-18 02:45:01 UTC
From: n4eo
Topic: 37 Message: 37

I haven't operated from a steel building at height since
college days when we loaded into window frame and worked Europe from
friend's dorm room at Vanderbilt U. in Nashville.

I'm on 9th floor (top) of Dragon Hill Lodge at US Army post in Seoul
and have the ATS-3 and ALT ready to go.

Will try a wire hanging from the window (it cracks open about 3 inches)
and have a five foot bamboo pole to give me a little offset.
Where is my Crappie pole when I need it?

We'll see how it goes- hopefully I can get a license tomorrow (Mon).

N4EO
Jerry

38. Re: Operation from steel building

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-18 08:44:42 UTC
From: Roland Whitsitt
Topic: 37 Message: 38

Jerry,
That's pretty cool stuff! Keep us informed.
Roland N5VWN/6
--- In AT_Sprint@yahoogroups.com, "n4eo" <brownj106@...> wrote:
>
> I haven't operated from a steel building at height since
> college days when we loaded into window frame and worked Europe
from
> friend's dorm room at Vanderbilt U. in Nashville.
>
> I'm on 9th floor (top) of Dragon Hill Lodge at US Army post in
Seoul
> and have the ATS-3 and ALT ready to go.
>
> Will try a wire hanging from the window (it cracks open about 3
inches)
> and have a five foot bamboo pole to give me a little offset.
> Where is my Crappie pole when I need it?
>
> We'll see how it goes- hopefully I can get a license tomorrow
(Mon).
>
> N4EO
> Jerry
>

39. Run for the Bacon, 6/18/2006, 6:00 pm

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-19 00:43:19 UTC
From: AT_Sprint@yahoogroups.com
Topic: 39 Message: 39

Reminder from the Calendar of AT_Sprint
http://groups.yahoo.com/group/AT_Sprint/cal

Run for the Bacon
Sunday June 18, 2006
6:00 pm - 8:00 pm
(This event repeats every month.)
Event Location: Your shack or anywhere

Notes:
This Sunday evening, the Flying Pigs Amateur Radio Club International
will be holding its monthly Run For The Bacon. This is a friendly,
two hour QRP CW Sprint, which is open to ALL radio amateurs, will last
from 9:00 - 11:00PM EDT (0200-0400 UTC Monday).

You may work stations once per band on 160, 80, 40, 20, 15 or 10
Meters. Suggested starting frequencies are 1.812, 3.562, 7.044,
14.062, 21.062, and 28.062 MHz.

The exchange is RST, S/P/C (State, Province, Country) and Flying Pigs
membership number. If you're not a member of the Flying Pigs, and
would like to be; then please cli

Set up birthday reminders!
http://us.rd.yahoo.com/cal_us/rem/?http://groups.yahoo.com/group/AT_Sprint/cal?v=9&evt_typ
e=13

Copyright 2006 Yahoo! Inc. All Rights Reserved.
http://www.yahoo.com

Privacy Policy:
http://privacy.yahoo.com/

Terms of Service:
http://docs.yahoo.com/info/terms/

40. AT-Day is here

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-19 12:13:18 UTC
From: Jeffrey Embry
Topic: 40 Message: 40

Shipping date - give or take - according to the website is here.
Wonder how long shipping will take?

--
Jeff Embry, K3OQ
FM19je
ARCI #11643
FPQRP #-696
NAQCC #25
AMSAT LM-2263

No trees were harmed in the sending of this message, however a large
number of electrons were terribly inconvenienced.

41. New firmware available

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-19 14:32:27 UTC
From: Michael Harnage
Topic: 41 Message: 41

I have updated my website with new firmware for the
ATS2, ATS3 and (hopefully) the ATS3A. The new firmware
adds support for the ATS3A, scanning capability, and a
button paddle mode. The ATS3A compatibility should
work but I won't know for sure until I actually get my
ATS3A. :)

For more information check out:

<http://w1mt.qrpradio.com/ats3.html>

For scan mode:
<http://w1mt.qrpradio.com/scanmode.html>

For button paddle mode:
<http://w1mt.qrpradio.com/buttonpaddle.html>

73 de mike
mike

Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

42. Re: New firmware available

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-19 15:51:52 UTC
From: Steve/n0tu
Topic: 41 Message: 42

> I have updated my website with new firmware for the
> ATS2, ATS3 and (hopefully) the ATS3A. > mike

How difficult is to upload the new firmware to ATS? before built?
Steve.

43. Re: [AT_Sprint] Re: New firmware available

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-19 16:09:02 UTC
From: Michael Harnage
Topic: 41 Message: 43

Hi Steve,

Not difficult at all. I have reprogrammed my original ATS3 rig literally hundreds of times. All the instructions are on my website.

It can be done on the chip before building (need the TI FET debugger) or

it can be done to the rig after it is built (using either the TI FET debugger or the cheaper Olimex JTAG cable).

You can do it yourself with about $25 in parts (an Olimex JTAG cable and a little wire and few connectors).

Quite a few folks have gone the Olimex cable route and that is what I recommend. This is almost as cheap as postage to and from me to do it for you.

For those who have do not have a rig built yet, I recommend build it as is and get used to Steve's firmware first. Then after reading my website, if my firmware appeals to you, try it out. You can always go back to Steve's if you want.

-mike/w1mt
<http://w1mt.qrpradio.com>

--- Steve/n0tu <n0tu.qrp@...> wrote:

> > I have updated my website with new firmware for
> the
> > ATS2, ATS3 and (hopefully) the ATS3A. > mike
>
> How difficult is to upload the new firmware to ATS?
> before built?

Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

44. Re: AT-Day is here

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-19 16:52:55 UTC
From: Roland Whitsitt
Topic: 40 Message: 44

Hey Jeff and all,
I was just telling my XYL what a special day it is. Our radios are due to be shipped! I'm all excited. My wife wishes I was excited about our annivesary yesterday. hi hi She has been rolling her eyes up at my every mention of it, it looks like she is going into a sezure, every time I mentin the ats.
Roland n5vwn

--- In AT_Sprint@yahoogroups.com, "Jeffrey Embry" <jeffrey.embry@...> wrote:
>
> Shipping date - give or take - according to the website is here.
> Wonder how long shipping will take?
>
> --
> Jeff Embry, K3OQ
> FM19je
> ARCI #11643
> FPQRP #-696
> NAQCC #25
> AMSAT LM-2263
>
> No trees were harmed in the sending of this message, however a large
> number of electrons were terribly inconvenienced.
>

45. ATS-3 transmitter silence in Korea

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-20 07:38:45 UTC
From: n4eo
Topic: 45 Message: 45

The gentleman in J-3 who issues licenses is on leave.

But the ATS-3 was hearing all over during weekend Asian cw contest.
Listening on 40 meters, following stations heard:
UA0,HL5,DS1,scads of JA's
K7QQ
K6BZS
KH0N
KH7A
K8IA
Operation on 40 meters is below 7.025 by regs here.
All 20 meters is available.

72,

N4EO
121 General Hospital
Yangsan Barracks
Seoul, Korea

46. Re: ATS-3 transmitter silence in Korea

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-20 15:05:55 UTC
From: Roland Whitsitt
Topic: 45 Message: 46

I've been trying to get licensed in the Philippines and it's been tough. I think most of the folks I've run across have just been signing with a /DU1 or whatever. I'm tempted to do the same. The hang up at the moment is they want a letter of good standing from the US Embassy in Manila. They don't want to do it because they don't have that form. Philippine's way isn't the US Embassy way. Then if you can get that, it's at least a 30 day wait. I won't hve that kind of time. You know, you try to do right but if they make it impossible, well, I know they don't have the resources to do anything about it. I'm still trying to do it thier way right now though.

--- In AT_Sprint@yahoogroups.com, "n4eo" <brownj106@...> wrote:

>
> The gentleman in J-3 who issues licenses is on leave.
>
> But the ATS-3 was hearing all over during weekend Asian cw contest.
> Listening on 40 meters, following stations heard:
> UA0,HL5,DS1,scads of JA's
> K7QQ
> K6BZS
> KH0N
> KH7A
> K8IA
> Operation on 40 meters is below 7.025 by regs here.
> All 20 meters is available.
>
> 72,
>
> N4EO
> 121 General Hospital
> Yangsan Barracks
> Seoul, Korea
>

47. Field Day, 6/24/2006, 12:00 am

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-21 06:58:51 UTC
From: AT_Sprint@yahoogroups.com
Topic: 47 Message: 47

Reminder from the Calendar of AT_Sprint
http://groups.yahoo.com/group/AT_Sprint/cal

Field Day
Saturday June 24, 2006
All Day
(This event does not repeat.)
Event Location: Anywhere, best in the great out doors with friends!

Notes:
This is a big one! K6WAY, W6YGZ, N5VWN will be in Lake Tahoe (SV, Eldarado County, Ca).

Set up birthday reminders!
http://us.rd.yahoo.com/cal_us/rem/?http://groups.yahoo.com/group/AT_Sprint/cal?v=9&evt_type=13

Copyright 2006 Yahoo! Inc. All Rights Reserved.
http://www.yahoo.com

Privacy Policy:
http://privacy.yahoo.com/

Terms of Service:
http://docs.yahoo.com/info/terms/

48. Any word on whether...

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-22 03:06:05 UTC
From: Jeff Embry (K3OQ)
Topic: 48 Message: 48

...the ATS-3A has begun shipping or not? I am frothing at the mouth
with anticipation.

--
Jeff Embry, K3OQ
FM19je
ARCI #11643
FPQRP #-696
NAQCC #25
AMSAT LM-2263

No trees were harmed in the sending of this message, however a large
number of electrons were terribly inconvenienced.

49. Re: Any word on whether...

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-23 00:55:20 UTC
From: Roland Whitsitt
Topic: 48 Message: 49

When I saw the thin box in the mail, I got a lump in my throat. Then
I saw it was for my wife. Palates cd or something like that. At
least I will be busy with field day the next few days.
Still, I wait with baited breath! Like a kid waiting on Christmas.
I'm 47 for goodness sakes! Even when I get it, I still got to
assemble it and make it work. Anybody know some good mojo spells? Oh
well, I got the rockmite and k2 to work. But this is a different
animal. I'm already fretting over soldering U6! hi hi
Roland in Stockton, Ca. 106 degrees!
looking forward to Lake Tahoe
n5vwn
--- In AT_Sprint@yahoogroups.com, "Jeff Embry (K3OQ)"
<jeffrey.embry@...> wrote:
>
> ...the ATS-3A has begun shipping or not? I am frothing at the mouth
> with anticipation.
>
> --
> Jeff Embry, K3OQ
> FM19je
> ARCI #11643
> FPQRP #-696
> NAQCC #25
> AMSAT LM-2263
>
> No trees were harmed in the sending of this message, however a large
> number of electrons were terribly inconvenienced.
>

50. Fwd: ATS-3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-23 01:13:59 UTC
From: Jeffrey Embry
Topic: 50 Message: 50

Hi folks....wont be long now. :-)

--
Jeff Embry, K3OQ
FM19je
ARCI #11643
FPQRP #-696
NAQCC #25
AMSAT LM-2263

No trees were harmed in the sending of this message, however a large
number of electrons were terribly inconvenienced.
---------- Forwarded message ----------
From: Steven Weber <kd1jv@...>
Date: Jun 22, 2006 5:05 PM
Subject: Re: ATS-3A
To: jkembry@...

>Just curious to know if the ATS-3A's have started shipping.
>
Yes, first batch just went into the mail today.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

51. Re: Any word on whether...

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-23 11:32:12 UTC
From: fixnwrtr
Topic: 48 Message: 51

I know lots of good mojo spells, but I think a good soldering iron and
a steady hand will be your best bet.

73,
Jackie Cornwell
AC0CA

--- In AT_Sprint@yahoogroups.com, "Roland Whitsitt" <n5vwn@...> wrote:
>
> When I saw the thin box in the mail, I got a lump in my throat. Then
> I saw it was for my wife. Palates cd or something like that. At
> least I will be busy with field day the next few days.
> Still, I wait with baited breath! Like a kid waiting on Christmas.
> I'm 47 for goodness sakes! Even when I get it, I still got to
> assemble it and make it work. Anybody know some good mojo spells? Oh
> well, I got the rockmite and k2 to work. But this is a different
> animal. I'm already fretting over soldering U6! hi hi
> Roland in Stockton, Ca. 106 degrees!
> looking forward to Lake Tahoe
> n5vwn
>

52. It's HERE

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-25 18:27:36 UTC
From: Jeff Embry (K3OQ)
Topic: 52 Message: 52

2 ATS3a's arrived in the mail yesterday. Will be starting later this week.

--
Jeff Embry, K3OQ
FM19je
ARCI #11643
FPQRP #-696
NAQCC #25
AMSAT LM-2263

No trees were harmed in the sending of this message, however a large
number of electrons were terribly inconvenienced.

53. Ham adventure from one of our own!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-25 22:26:08 UTC
From: Roland Whitsitt
Topic: 53 Message: 53

Hey gang, I just ran across this on eham.net. Our own AE5X posted a neat story here: http://www.eham.net/articles/14090
Although he used the kx1, it's still an excellent read. Anyways, I think the kx1 is also a great rig. Of course I would say that being a k2 owner.
Anyways, read his story! John also has a good website that has some excellent info on the ATS3. It's linked from KD1JV's site. Here is the link http://www.ae5x.com/ats3.html
On another note, I had a fabulous field day with two of my friends up at South Lake Tahoe. It was nice to escape the 106 degree heat of Stockton, Ca for the 87 degree of the campsite. We even had a cloud come over us and the temp dropped to a cool 77! Made a lot of contacts (for me anyways) and just generally enjoyed the time. No surprises, everything worked. We really didn't rough it as the campsite is IN town. A subshop within walking distance. We managed.
Good to see the ats3a's are arriving already. I'll be looking for the mailman on Monday!!!!!!!!!!!!!!!!!!!!
Roland N5VWN

54. Re: It's HERE

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-27 01:49:18 UTC
From: w1mt
Topic: 52 Message: 54

Anybody inventoried their kits yet? Noticed right off the bat that I was missing 1 stereo connector. Gonna do a full inventory tomorrow just in case.

73 de w1mt
mike

--- In AT_Sprint@yahoogroups.com, "Jeff Embry (K3OQ)" <jeffrey.embry@...> wrote:
>
> 2 ATS3a's arrived in the mail yesterday. Will be starting later this week.
>

55. Woohoo! ...envelope from KD1JV!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-27 03:05:15 UTC
From: Steve/n0tu
Topic: 55 Message: 55

It's here! But work and chores will keep me from it until weekend,
sigh. Steve/n0tu

56. 3A board complete

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-27 23:23:42 UTC
From: w1mt
Topic: 56 Message: 56

Had an extra two hours today and finished up the main board of the ATS3A. Works FB so far. Now to complete the filter boards and see if it has power out. :-)

Some hints:

1. Make sure you read the manual - U12 is not positioned according to the board layout -- the manual is correct.

2. If it is your first time building one of these ATS rigs -- pay close attention to which side of the board the parts attach. Most are easy, but a few might be tricky.

3. Put the 2n7000 mosfets in after putting the diode in on the opposite side of the board. (D3 I think). Otherwise you will have to bend the fets up a little to insert the diode. Doh!

After putting the filter boards together it will be time to flash the mpu and put my firmware on it for testing. After building the 3A and looking at the schematic I believe that my firmware will work just fine.

Good Luck with yours!

-mike/w1mt

57. Re: [AT_Sprint] 3A board complete

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-28 00:12:46 UTC
From: Gil Stacy
Topic: 56 Message: 57
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

58. ATS-3 at H L 9 E O ready for DX from Korea

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-28 22:47:00 UTC
From: n4eo
Topic: 58 Message: 58

Yep, N4EO is now legal to operate from US military
installations in Korea. For me, that's Yongsan Barracks,
Area 2, Seoul. On 40M operation permitted only below 7.025.
I'm here until Aug 7.

72,
Jerry
N4EO, HL9EO

59. ATS-3 questions

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-29 06:27:42 UTC
From: fixnwrtr
Topic: 59 Message: 59

Since this will be my first Sprint, I don't know what extras I will need to complete the project. I've looked at the site and am ready to take the plunge for the ATS-3, but what else should I add to my order? Any and all suggestions would be helpful.

73,
Jackie Cornwell
AC0CA

60. RE: [AT_Sprint] ATS-3 questions

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-29 06:52:29 UTC
From: DOUG PHILLIPS
Topic: 59 Message: 60

Jackie,

I'm going to guess you have a solder station, magnifying lamp/head visor/stereo microscope already. You just need the ATS-3A and some Altoids tins, I took four tries with my ATS-3 to get it into a tin, you may be a better metal worker than I am. For what it is worth, I think the ATS-3A is an easier build, I have the board done and am working on winding the inductors now.

When Doug Hendricks gets back from vacation order the ALT kit from him (Altoids Long Wire Tuner).

>but what else should I add to my order?
>Any and all suggestions would be helpful.

73

Doug W7RDP

61. RE: [AT_Sprint] ATS-3 questions

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-29 10:24:22 UTC
From: Michael Harnage
Topic: 59 Message: 61

Jackie,

Doug has some excellent ideas. Please also check out:

<http://kl7r.ham-radio.ch> goto the ats3 page

and

<http://www.ae5x.com/ats3.html>

for more hints at contruction, etc.

I agree with Doug the ATS3A is easier to build the
main board then the ATS3, BUT the filter boards are a
little harder (I don't like 32 gauge wire :-))

Have fun with it,
Mike/w1mt

Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

62. Re: [AT_Sprint] 3A board complete

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-29 10:27:36 UTC
From: Michael Harnage
Topic: 56 Message: 62

Gil and group,

My 3A is complete and the filter boards are all
together! I get 2.6 watts or better on all bands with
9.6V NiMh battery pack.

So Gil, it's time to start. :O)

mike/w1mt

--- Gil Stacy <gilstacy@...> wrote:

> Mike,
> Got mine in today. I'll wait to hear if yours fires
> up before I start. ;)
> Gil NN4CW
>

Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

63. Re: [AT_Sprint] ATS-3 questions

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-29 10:28:25 UTC
From: Gil Stacy
Topic: 59 Message: 63
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

64. 3A Board Build

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-29 10:56:33 UTC
From: Jeffrey Embry
Topic: 64 Message: 64

Hi all,

Got over to Dave's (WA3OFF) last night and got most of the
semi-conductors on the board. This has been my first experience with
SMT and I gotta tell ya, that the water-soluable flux that Dave uses
is some great stuff. Got all the semi-conductors mounted on the top
of the board in about an hour and 45 minuted as Dave was training me
on the use of the stuff. I am sure he could have done the job that I
did in less than 1/2 hour.

This evening I will be getting more of the components on ... and
hopefully will have the whole kit built and tested by the Spartan
Sprint on Monday evening. If it isn't ready I will be on the air with
the KX-1.

BTW Dave did an absolutely beautiful job on his ATS-3A and listening
to W1AW on 80 meters last night with a small piece of coax and very
little antenna told me how hot the receiver is...and I am really
looking forward to that. Additionally, the set of paddles he made
with circuit board material really looks cool.

Time to get to work. Hope everyone has a great day.

72,

--
Jeff Embry, K3OQ
FM19je
ARCI #11643
FPQRP #-696
NAQCC #25
AMSAT LM-2263

No trees were harmed in the sending of this message, however a large
number of electrons were terribly inconvenienced.

On 6/28/06, Dave Mertz <dmertz@...> wrote:
> Yeah, the that 80M coil was a bit of work. After winding the 60
> turns I counted the turns many times to be sure they were right,
> but I realized that it would be impossible to count the link
> after it was wound on top of the 60 turns, so I just carefully
> counted as I went (only had to pay attention for 10 turns).
>
> I'll have to take a look at the code to see what it's like. My
> regular work involves assembly programming embedded applications
> (and surface-mount hardware design and assembly), so I have some
> JTAG programming stuff. Thanks for the link to the programming

> instructions. I don't know if any of what I have is suitable
> though (Xilinx Parallel Cable IV and ST FlashLINK). I have the
> schematic for the FlashLINK, so I can probably figure out how to
> make it work. Still, $15 for the Olimex cable is easy to deal
> with, probably worth getting rather than spending the time to
> figure out if the FlashLINK cable will work. Much easier to
> start with something that works and try variations later.
>
> Mike, so your version allows independent tuning on TX and RX in
> split mode? Pretty nice. I was wanting to add a variable tune
> rate based on how long the Up or Down button is held, possibly
> with a beep as the thing tunes through "round-number"
> frequencies. I also wanted to retain the CW band limits but
> with override into the phone segment (and possibly similar
> limits on the General/Extra segments).
>
> I've also thought of doing a daughterboard to bring back the
> filter in/out switch, should be pretty simple to tie it in
> at the caps in and out of the filter. I was excited that
> the ATS-3 had this since it's my first HF rig, so I was a bit
> disappointed to find out that it was removed in the ATS-3A.
> Any reason why it was removed besides PCB real estate?
>
> Thanks for the note on 20 and 80 (I wasn't sure which bands use
> upper/lower sideband vs. which side is used for CW). I'll have
> to try tuning in 40M phone when I have 15 minutes to kill.
>
> I have to consolidate my notes on manual errata. I found quite
> a few, both in construction and operation.
>
> Jeff, BTW I heard mention of Gene, W3ZZ, in the text sent as
> W1AW code practice today.
>
> Dave, WA3OFF
>
> -----Original Message-----
> From: Michael Harnage [mailto:w1mt@...]
> Sent: Wednesday, June 28, 2006 1:33 PM
> To: dmertz@...; 'Jeff Embry (K3OQ)'
> Subject: RE: [FWD] 3A board complete
>
>
>
> Hi Dave and Jeff,
>
> Good work Dave. I just wound the 80 40 and 30 toroids
> at lunchtime today (finished the 20 board this morning
> before work). That 80 was a bear. Ended up scramble
> winding the secondary on LF3.
>

> RE: limits and tuning. There are some bugs in the way
> Steve implemented this, and you found you found one.
> The original version (ATS2) had limits. The one that I
> created and subsequently Steve incorporated some
> features in his version, did not have limits. With
> this new version he has brought limits back. Why? I
> don't know. Maybe a liability thingie. My version
> still does not have any limits to tuning or
> transmitting (must be careful!!!). Mine also has dual
> vfo's and a real split mode, plus scanning and a
> button paddle mode where the menu and tune down button
> become your paddle/key (or just the menu button if you
> booted up in straight key mode).
>
> RE: Flashing the chip. Instructions for doing this are
> on my website (<http://w1mt.qrpradio.com>). If you
> have any questions please ask. I can even zip up my
> development directory so you don't have to go thru
> setting up the IAR Suite. That is where most folks
> miss something.
>
> RE: Cross mode. 20 and 80 will put you on the wrong
> side so it is not possible (except with split) to do
> cross mode easily. The ATS3 has the adjustment in the
> f/w but it is out of this version. If you look at my
> version of the firmware (website agn) you can see that
> I use #def to include or not include the offset. Look
> for the symbol WIDE to see what I did.
>
> GL es 73 de w1mt
> mike
>
>
> --- Dave Mertz <dmertz@...> wrote:
>
> > I've been chasing water for the past few days, so
> > tonight is probably
> > not good. I have to catch up on real work.
> >
> > I did pretty much everything in Mike's suggestions.
> > The instructions
> > imply that L3 goes on the top of the board but
> > pictures of earlier
> > ATS-3s show it on the bottom where there is much
> > more room and there
> > is sufficient space between the board and the case.
> > I put Kapton tape
> > in a few places as a precaution, particularly on the
> > lid above the
> > filter board.

> >
> > I'm interested in getting set up to flash the code.
> > I've found a few
> > things I would like to change. I've also found a
> > quirk with the
> > tuning range. Although the up and down buttons will
> > hit limits at
> > the end of the CW bands, the test is for equal to
> > instead of less than
> > or greater than. It's possible to do a direct
> > frequency entry to
> > some other areas, particularly xx.8000 MHz on any
> > band. You can then
> > Up or Down from there. That permits reaching the
> > phone bands, but
> > starting at 14800.0 and dialing down takes about 15
> > minutes to reach
> > the 20M phone band. 80M isn't too bad, but I think
> > with the filter in
> > there you get the wrong sideband (which is why I
> > spent 15 minutes to
> > reach the 20M phone band; too late at night for any
> > signals, though).
> >
> > I mounted a 1-hole SMA. It fit nicely. I've
> > connected a short piece
> > of RG-174 for now to clip to my "antenna". Now I
> > need a good ground
> > and an antenna tuner (and maybe a real SWR meter and
> > antenna).
> >
> > The 80M band filter was at the low capacitance end
> > of its range, so I
> > replaced the 100 pF disk cap with a 68 pF
> > surface-mount cap that I
> > had. Adjustment is now in the middle of the range.
> > I'm not sure
> > why he used a ceramic disk instead of a
> > surface-mount cap except that
> > everything else on that board is through-hole.
> >
> > I've been copying W1AW when I can (no trouble
> > hearing it) to get my
> > code speed back up. I'm pretty solid at 10 WPM and
> > I've pretty well
> > equaled my best which was sufficient to pass the
> > original code test
> > (25 consecutive characters at 13 WPM; I took the
> > Technician Class
> > exam at the FCC in DC in the early '70s where they

> > had no 5 WPM
> > tape). Starting to hear some words and parts of
> > words instead of
> > just letters. Getting better at numbers too reading
> > the rig's
> > frequency.
> >
> > Also built a set of paddles from 1/16" and 1/32"
> > copper-clad board.
> > The 1/32" board makes up the paddles and flexes
> > nicely to reach and
> > return from the contacts.
> >
> > Dave
> >
> > -----Original Message-----
> > From: Jeff Embry (K3OQ)
> > [mailto:jeffrey.embry@...]
> > Sent: Tuesday, June 27, 2006 7:55 PM
> > To: Dave Mertz
> > Subject: [Fwd: [AT_Sprint] 3A board complete]
> >
> >
> > Dave,
> >
> > After speaking with you and seeing this email from
> > Mike...I am getting
> > the urge. Do you wanna try and get together after
> > work
> > Wed/Thur/Fri....your pick. Let me know.
> >
> > --
> > Jeff Embry, K3OQ
> > FM19je
> > ARCI #11643
> > FPQRP #-696
> > NAQCC #25
> > AMSAT LM-2263
> >
> > No trees were harmed in the sending of this message,
> > however a large
> > number of electrons were terribly inconvenienced.
> >
> >
> >
> > -------- Original Message --------
> > Subject: [AT_Sprint] 3A board complete
> > Date: Tue, 27 Jun 2006 23:23:42 -0000
> > From: w1mt <w1mt@...>
> > Reply-To: AT_Sprint@yahoogroups.com

> > To: AT_Sprint@yahoogroups.com
> >
> >
> >
> > Had an extra two hours today and finished up the
> > main board of the
> > ATS3A. Works FB so far. Now to complete the filter
> > boards and see if
> > it has power out. :-)
> >
> > Some hints:
> >
> > 1. Make sure you read the manual - U12 is not
> > positioned according to
> > the board layout -- the manual is correct.
> >
> > 2. If it is your first time building one of these
> > ATS rigs -- pay
> > close attention to which side of the board the parts
> > attach. Most are
> > easy, but a few might be tricky.
> >
> > 3. Put the 2n7000 mosfets in after putting the diode
> > in on the
> > opposite side of the board. (D3 I think). Otherwise
> > you will have to
> > bend the fets up a little to insert the diode. Doh!
> >
> > After putting the filter boards together it will be
> > time to flash the
> > mpu and put my firmware on it for testing. After
> > building the 3A and
> > looking at the schematic I believe that my firmware
> > will work just fine.
> >
> > Good Luck with yours!
> >
> > -mike/w1mt
> >
> >
> >
> >
> >
> >
> > ---------- Yahoo! Groups Sponsor
> >
> >
> >
> > Yahoo! Groups Links
> >

> >
> > AT_Sprint-unsubscribe@yahoogroups.com
> >
> >
> >
> >
> >
> >
> >
> >
> >
> >
>
>
> _____
> Do You Yahoo!?
> Tired of spam? Yahoo! Mail has the best spam protection around
> http://mail.yahoo.com
>
>

65. Re: [AT_Sprint] 3A board complete

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-29 12:40:36 UTC
From: Gil Stacy
Topic: 56 Message: 65
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

66. Tinpod

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-29 17:56:30 UTC
From: Jeffrey Embry
Topic: 66 Message: 66

How about one of these to mount the ATS3a in?

http://www.thetinpod.com/

Kinda cool.

--
Jeff Embry, K3OQ
FM19je
ARCI #11643
FPQRP #-696
NAQCC #25
AMSAT LM-2263

No trees were harmed in the sending of this message, however a large
number of electrons were terribly inconvenienced.

67. Re: 3A Board Build

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-29 19:57:49 UTC
From: Dave
Topic: 64 Message: 67

I saw Steve's strong suggestion about not using liquid flux. Perhaps Steve's warning was referring to liquid rosin flux, I don't know. After trying to solder the first pin without it, I decided to go back to the water-soluble liquid flux and solder, Kester 2331-ZX and #66/331 (http://www.kester.com/en-us/products/prodcat_detail.aspx?pid=47) and PACE mini-wave soldering-iron tip I've been using for years for surface-mount assembly. I have a lot of practice at cleaning this stuff, and it seems to wash away very nicely, so I figured I would take the chance.

I left off the buttons, crystals (I was concerned about cleaning the tight space between the crystal bottoms and the board), the BFO cap CT1 and of cource, L3 until after the wash. For washing I did a double hot-water spray (kitchen-sink sprayer) and compressed air drying, followed by a rinse in 91% isopropyl alcohol and another compressed-air drying. Compressed air was from an unrestricted blow nozzle at 90 psi. I don't think I would attempt to use the water-soluble flux for this project unless I had a good source of compressed air to get water out from under the components.

After the wash I switched to the kit-supplied solder for the remainder of the assembly work. I've seen nothing to suggest any flux-related problems. Whether it's luck or skill, I can't say, but the rig seems to work flawlessly.

Dave, WA3OFF

68. Re: [AT_Sprint] Re: 3A Board Build

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-29 20:35:15 UTC
From: Michael Harnage
Topic: 64 Message: 68

I think Steve recommendation comes from some of the
rework he has had to do.

Confession time -- The last two ATS's I have built I
used a Kester Flux Pen (exact part number escapes me)
followed with an acetone/toothbroush wash. Works fine
for me BUT your mileage may vary. Never even had to
remove solder bridges from the DDS chip. Stuff works
great. For me. Given Steve's warning, use this method
at your own risk, though.

I want to try the warming pad/embossing gun/solder
paste method next. Maybe build another smt dummy load
to test that method. For more information on this
method see:
<http://www.zianet.com/erg/SMT_Soldering.html>

In a lot of ways I think smt work is much faster and
easier than thru hole contruction. If only my eyes
will hold out!

73 de w1mt
mike

--- Dave <dmertz@...> wrote:

> I saw Steve's strong suggestion about not using
> liquid flux.
> Perhaps Steve's warning was referring to liquid
> rosin flux, I don't
> know.
>

Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

69. Another ATS-3A lives

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-30 03:09:11 UTC
From: DOUG PHILLIPS
Topic: 69 Message: 69

OK gang,

Just powered up the main board and got the sweet sounds of 20m, made lots of dits and dahs, something around 20mA of draw at 9VDC, and all smoke was retained. I have the 20m board done and am working on the rest, maybe it will be operational for Salmoncon/Lobstercon, if not the ATS-3 will be there anyway.

73

Doug W7RDP

70. Re: ATS-3 questions

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-30 04:32:04 UTC
From: fixnwrtr
Topic: 59 Message: 70

Doug,

No, I don't have any of those things. I have a soldering iron. All this is very new to me and I want to do it right. I have put together a lot of things, but electronics haven't been on the list -- until now. The magnifying lamp/head visor I can find. Would you mind suggesting a solder station? And a stereo microscope? I have plenty of Altoids tins (I saved them for a friend but he had enough so I've kept them here). I'll ask Doug Hendricks about the ALT kit. Like I said, this is all new to me and I'm excited to jump right in. Would be nice to have a partner, but I'm used to learning on my own. ;-) Thanks for all the suggestions and I apologize in advance for all the questions I'm going to ask (and warning you, too).

72,
Jackie
AC0CA

--- In AT_Sprint@yahoogroups.com, "DOUG PHILLIPS" <w7rdp@...> wrote:
>
> Jackie,
>
> I'm going to guess you have a solder station, magnifying lamp/head
> visor/stereo microscope already. You just need the ATS-3A and some Altoids
> tins, I took four tries with my ATS-3 to get it into a tin, you may be a
> better metal worker than I am. For what it is worth, I think the ATS-3A is
> an easier build, I have the board done and am working on winding the
> inductors now.
>
> When Doug Hendricks gets back from vacation order the ALT kit from him
> (Altoids Long Wire Tuner).
>
> >but what else should I add to my order?
> >Any and all suggestions would be helpful.
>
> 73
>
> Doug W7RDP
>

71. Re: ATS-3 questions

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-30 04:32:54 UTC
From: fixnwrtr
Topic: 59 Message: 71

Thanks for the links, Michael. More information is always good.

Jackie
AC0CA

--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:
>
> Jackie,
>
> Doug has some excellent ideas. Please also check out:
>
> <http://kl7r.ham-radio.ch> goto the ats3 page
>
> and
>
> <http://www.ae5x.com/ats3.html>
>
> for more hints at contruction, etc.
>
> I agree with Doug the ATS3A is easier to build the
> main board then the ATS3, BUT the filter boards are a
> little harder (I don't like 32 gauge wire :-))
>
> Have fun with it,
> Mike/w1mt
>
>
> _____
> Do You Yahoo!?
> Tired of spam? Yahoo! Mail has the best spam protection around
> http://mail.yahoo.com
>

72. RE: [AT_Sprint] Re: ATS-3 questions

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-06-30 05:12:23 UTC
From: DOUG PHILLIPS
Topic: 59 Message: 72

OK Jackie,

I use a 3x lighted magnifying fluorescent lamp, Circuit Specialists Hakko knockoff temp controlled soldering station ($35), sometimes a Weller 25w iron with a fine tip, and Steve supplies all the solder you will need. I also use Radio Shack .015" dia. silver bearing solder. You might want to get a large aluminum baking pan to use on the project, the sides will keep all the little SMT parts corralled, I have lost a few to the floor and cats over time. The web sites Mike gave are excellent resources, there are a series of articles on the ARRL web site on SMT construction and lots of good info in the Homeberwer Magazine CDs (still available from AMQRP).

If this is you first attempt at SMT construction, I would recommend a couple of the small SMT projects from NorCal, dummy load and tuneruppers. Steve also has a digital dial project, which would be a good one also for practice before starting on the ATS-3A.

The only really tough IC to solder is the AD9834 DDS VFO. The hard part is getting is aligned to the pads on the PCB, once that is done, double check to make sure all the little feet are where they belong and tack down the four corners. Once you are sure you have the chip sited OK solder the rest of the pins and don't worry about solder bridges. When all pins are soldered take some solder wick, apply the tip of your iron to the wick and draw it along the pins of the IC. The wick will remove the solder bridges and you are in business.

Keep you questions coming, this group is a good resource for info and tips.

73

Doug W7RDP

73. de HL9EO

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-01 00:09:57 UTC
From: n4eo
Topic: 73 Message: 73

Don't leave home without it...THE PADDLES.
Yes, I left my paddles at home in Honolulu, so last evening I cobbled a set of paddles from small cedar wood (odor killer planks), a plastic 12" kids school ruler, copper foil, glue, etc scavanged at Army PX here in Seoul (using my trusty Swiss Army knife's saw blade). I'm waiting for the glue to dry. It's Saturday morning and I will get on the air Sat evening on (trying 40, 30, 20) with wire draped from 9th floor of my hotel room. Found 22 ga copper wire (50 feet for $0.80) at also at the PX (in picture hanging/framing section). Small stealthy stuff I wanted!

QSL info COL Jerry Brown, 121 Genreal Hospital, BOX 239, APO AP 96205 USA...

My BOX number may match my reports(???), hope not. ATS-3 ready to roll. Ordering WA3WSJ AT paddle soon,

72,

Jerry N4EO, Honolulu
HL9EO, Seoul

74. Re: de HL9EO

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-01 01:57:17 UTC
From: Roland Whitsitt
Topic: 73 Message: 74

Jerry, This is gripping stuff! Keep us posted. I'm eager to hear
about what kind of contacts you get from there.
73's Roland de N5VWN
Stockton, Ca.

--- In AT_Sprint@yahoogroups.com, "n4eo" <brownj106@...> wrote:
>
> Don't leave home without it...THE PADDLES.
> Yes, I left my paddles at home in Honolulu, so last evening I
cobbled a
> set of paddles from small cedar wood (odor killer planks), a
plastic
> 12" kids school ruler, copper foil, glue, etc scavanged at Army PX
here
> in Seoul (using my trusty Swiss Army knife's saw blade). I'm
waiting
> for the glue to dry. It's Saturday morning and I will get on the
air
> Sat evening on (trying 40, 30, 20) with wire draped from 9th floor
of
> my hotel room. Found 22 ga copper wire (50 feet for $0.80) at also
at
> the PX (in picture hanging/framing section). Small stealthy stuff
I
> wanted!
>
> QSL info COL Jerry Brown, 121 Genreal Hospital, BOX 239, APO AP
96205
> USA...
>
> My BOX number may match my reports(???), hope not. ATS-3 ready to
roll.
> Ordering WA3WSJ AT paddle soon,
>
> 72,
>
> Jerry N4EO, Honolulu
> HL9EO, Seoul
>

75. Board build continues

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-01 02:23:22 UTC
From: Jeff Embry (K3OQ)
Topic: 75 Message: 75

Yesterday got the semi-conductors on....today the resistors. Tomorrow I shoot for the caps. Taking my time since this is my 1st SMT project with more than a couple of components. And they seem to be about half the size of the previous surface mount that I had done in the past.

--
Jeff Embry, K3OQ
FM19je
ARCI #11643
FPQRP #-696
NAQCC #25
AMSAT LM-2263

No trees were harmed in the sending of this message, however a large number of electrons were terribly inconvenienced.

76. yipee...gud DX out of the gate...HL9EO works N6RO on 40 in first QSO

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-01 15:16:47 UTC
From: n4eo
Topic: 76 Message: 76

Happy Sat nite for me.
ATS-3 thru ALT to 51 foot hanging wire 3 feet off bricks at 9th story, with 11 foot counterpoise dangling against the bricks..... and very sharp tuning for great match.
Using bamboo yard lantern pole for my offset of 3 feet (bamboo in S.E. Asia, yesiree!)
TALLY- N6RO, 4 JA's, one Korean station- HL1/N8HI (Frank) all on 40 meters.
Broadcast QRM stiff to say the least, and found copy was better with ALT in tune mode for receiving (seems to be about 20 db attenuation, more or less). Great little boxes containing no RICE!
ATS-3A supposed to help the blasting my ears got from SWBC tonite.
Can't wait to hear how it's working thru the SWBC crud for the Europeans.

72 all,
Jerry N4EO/HL9EO
TDY 121 General Hospital until 8 Aug
Home of 8th US Army Yongsan Barracks, Seoul, Korea

77. Re: [AT_Sprint] yipee...gud DX out of the gate...HL9EO works N6RO on 40 in first QSO

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-01 23:20:13 UTC
From: Gil Stacy
Topic: 76 Message: 77
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

78. LiPo Charger

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-02 00:51:09 UTC
From: Dave
Topic: 78 Message: 78

What (inexpensive, say, $50 or less) chargers have people found to work well for charging LiPo batteries?

Dave, WA3OFF

79. Re: [AT_Sprint] LiPo Charger

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-02 01:21:52 UTC
From: Gil Stacy
Topic: 78 Message: 79
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

80. Re: [AT_Sprint] LiPo Charger

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-02 03:17:19 UTC
From: Michael Harnage
Topic: 78 Message: 80

This one works too. I use it.
<http://www.aeromicro.com/Catalog/thunder_power_tp-425_li-po_charger_3752218.htm>

73 de w1mt
mike

--- Gil Stacy <gilstacy@...> wrote:

> Two have been available from www.aeromicro.com
>
> However, only one is on the site now. It's the one
> I use:
>
>
http://www.aeromicro.com/Catalog/thunder_power_li-po_cell_balancer_tp-205_4311331.htm
>

_____
Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

81. Tuesday Spartan Sprint with ATS-3 from HL9EO...20 meters?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-02 04:07:18 UTC
From: n4eo
Topic: 76 Message: 81

Small problem....it will be morning Tuesday here, so 20 is my only option for propagation...and it's 11 hours on the clock behind East Coast time....BUT THANKS FOR THE SUGGESTION.and I WILL BE LISTENING! Looking for more stealth...my bamboo might be confused with a gun barrel sticking out the window (bad idea for daytime on Army post). The 22 ga wire is fine. May have a crack at Dean. Have worked him with 1/2 watt from Tennessee with Rock-Mite, but with YAGI at 110 feet.

73,
Jerry

82. Re: yipee...gud DX out of the gate...HL9EO works N6RO on 40 in first QSO

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-02 11:12:40 UTC
From: bill_w4zv
Topic: 76 Message: 82

--- In AT_Sprint@yahoogroups.com, "n4eo" <brownj106@...> wrote:

> Broadcast QRM stiff to say the least, and found copy was better with
> ALT in tune mode for receiving (seems to be about 20 db attenuation,
> more or less).

I found the same using the Emtech ZM-2. I later added a 2700 ohm SMD
on the back side of the 40m module to always add attenuation on 40m.
I was using a 180' doublet up 80' and the BCI RF was just too much for
the stock ATS-3.

> ATS-3A supposed to help the blasting my ears got from SWBC tonite.
> Can't wait to hear how it's working thru the SWBC crud for the
> Europeans.

I would also be interested or East Coasters' experience with the
ATS-3A and 40m BCI.

73, Bill

83. Safety First

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-02 14:14:12 UTC
From: Jeff Embry (K3OQ)
Topic: 83 Message: 83

Hi folks,

This morning while putting the caps on the board, I accidently grabbed the hot part of the soldering iron burning my thumb and two fingers (nicely blistered now). So...I thought I would send out a little reminder to hopefully keep this from happening to others. This will probably set me back a week or so...but the ATS-3a will get done before the Spartan Sprint for August.

Be mindful of your surroundings and keep safety first and formost while putting this rig together.

--
Jeff Embry, K3OQ
FM19je
ARCI #11643
FPQRP #-696
NAQCC #25
AMSAT LM-2263

No trees were harmed in the sending of this message, however a large number of electrons were terribly inconvenienced.

84. Li Po batteries and their chargers

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-03 15:39:53 UTC
From: ARCHIE LAMB
Topic: 84 Message: 84

(Sorry this is long)
A note of caution is in order here:
LiPos are potentially hazardous if not handled properly. I have quite a few (and use them regularly in my RC airplanes). You MUST have a "real" LiPo charger - not a Nicad or the like. They CANNOT be fast charged. To get them to full charge from pretty much drained is 2 to 4 hours. The good thing is that you can tell the charge state by measuring the terminal voltage. 3v(per cell) = discharged (lower risks permanently damaging the cell) 4.2 is pretty much fully charged and its fairly linear in between (I carry a graph when I fly to tell how much is left in the battery).
The stories about fires and explosions are worst case scenarios but NOT just urban myth. I know people like to exaggerate and tell a good story but I know a guy who destroyed his car and another who severely damaged his kitchen - those guys are idiots! right? well I didn't see their certification papers but they do seem aware enough to come in out of the rain. Seriously, accidents happen and these things CAN be dangerous. You've probably quit reading already but I suggest a "charging safe" - I use a cheap document safe modified to allow the charge cable into the box. Then I'm comfortable to walk away from the battery charging.
Have I ever had a battery erupt into a fireball? No. Have I ever had strange behavior? yes. I had a couple puff up to the point that I was not comfortable using them any more. Were they going to erupt into a fireball? I dont know but that is the next step (supposedly).
I have seen the chargers go from $29.95 to over $300. Most RC hobby stores will have both the batteries and chargers. There are lots of brands - Thunderpower has been mentioned and its a good one (their energy density is very good!)

for a starting place Check out:
http://www.towerhobbies.com
http://www.horizonhobby.com
http://www.radicalrc.com

Archie (KX5X)

85. ATS-3A is working

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-03 15:47:03 UTC
From: Kurt Loken
Topic: 85 Message: 85

Well...it works. I lost a 0.01uf cap, so I had to use a ceramic disk replacement for now...kind of looks like an out of place wart on this board...hi. Other than that there were no problems in the build.

I fired it up last night. I have only built the 30M band module so far, and 30M was pretty quiet for the short time I was on last night...so no contacts yet.

My watt meter shows I'm putting out 5W at 12V, and the receiver was nicely picking up the few folks that were on-air last night on 30M when I was on.

The interface is well thought-out on this rig, in my opinion. I just want to say that this rig is a truly a joy to control; I very much prefer the buttons to a knob for tuning. It must be all the video games I've played or something. The direct entry of freq from the paddle makes large moves in freq quick and easy. I also love the being able to do things like quickly flick the Rit button and have message 1 play. I expect this rig to become my workhorse.

Now I need to finish my other band modules, but so far so good. (I have all the toroids wound, but I just need to mount them. ...and I thought the NC2030 had a toroid from hell...this thing has many from the same circle of hell.)

I also need to get the darn thing in the Altoids case. If someone on here offered pre-drilled Altoids cases for the ATS rigs, they would make a buck or two (at least from me).

Regards,

Kurt - ae6uj

Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

86. 7812 Power supply step down for my ATS-3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-03 16:02:29 UTC
From: Kurt Loken
Topic: 86 Message: 86

Hello All,

Just thought I would let folks know of the method I'm
using to get 12V out of my 13.8V power supply for my
ATS-3A.

I used a 7812 voltage regulator and a 1/2 amp fast
burn fuse to step down my voltage. It appears to work
well for normal operation, but I did blow a fuse when
I entered "Tune" mode on the ATS. A beefier fuse may
be useful if you are going to use "Tune" mode (I won't
be using it.)

Let me know if you want any further info on the
circuit. The 7812 is cheaper than even a single 9V
battery, if you want to run from a power supply.

Regards,

Kurt - ae6uj

_____
Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

87. Re: [AT_Sprint] ATS-3A is working

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-03 16:03:21 UTC
From: Jeffrey Embry
Topic: 85 Message: 87

Kurt,

Not sure that you lost the 0.01 uf cap. Both Dave (WA3OFF) and I had
one missing. Fortunately Dave had replacements.

73,

--
Jeff Embry, K3OQ
FM19je
ARCI #11643
FPQRP #-696
NAQCC #25
AMSAT LM-2263

No trees were harmed in the sending of this message, however a large
number of electrons were terribly inconvenienced.

On 7/3/06, Kurt Loken <ae6uj@...> wrote:
> Well...it works. I lost a 0.01uf cap, so I had to use
> a ceramic disk replacement for now...kind of looks
> like an out of place wart on this board...hi. Other
> than that there were no problems in the build.
>
> I fired it up last night. I have only built the 30M
> band module so far, and 30M was pretty quiet for the
> short time I was on last night...so no contacts yet.
>
> My watt meter shows I'm putting out 5W at 12V, and the
> receiver was nicely picking up the few folks that were
> on-air last night on 30M when I was on.
>
> The interface is well thought-out on this rig, in my
> opinion. I just want to say that this rig is a truly
> a joy to control; I very much prefer the buttons to a
> knob for tuning. It must be all the video games I've
> played or something. The direct entry of freq from
> the paddle makes large moves in freq quick and easy.
> I also love the being able to do things like quickly
> flick the Rit button and have message 1 play. I
> expect this rig to become my workhorse.
>
> Now I need to finish my other band modules, but so far
> so good. (I have all the toroids wound, but I just
> need to mount them. ...and I thought the NC2030 had a
> toroid from hell...this thing has many from the same

> circle of hell.)
>
> I also need to get the darn thing in the Altoids case.
> If someone on here offered pre-drilled Altoids cases
> for the ATS rigs, they would make a buck or two (at
> least from me).
>
> Regards,
>
> Kurt - ae6uj
>
> _____
> Do You Yahoo!?
> Tired of spam? Yahoo! Mail has the best spam protection around
> http://mail.yahoo.com
>
>
>
>
> Yahoo! Groups Links
>
>
>
>
>
>
>

88. Re: [AT_Sprint] ATS-3A is working/ short one .01uF cap

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-03 22:30:06 UTC
From: DOUG PHILLIPS
Topic: 85 Message: 88

Guys I was missing one also, but have spares around from other projects.
Steve may have miscounted but everything else was there in my kit.

73

Doug W7RDP

89. ATS-3A arrived in OK land

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-04 16:00:44 UTC
From: Petr Ourednik
Topic: 89 Message: 89

Hi,

my name is Petr, OK1RP and I am licensed since 1988. My first novice callsign was OL1BVR then I upgraded class with exchange the callsign to OK1PRR. My current callsign with extra class is OK1RP.

I joined Your AT_Sprint group as I am interested in the ATS radio and even my new baby arrived in OK land few days ago.

In the Files You can find the ATS-3 building instructions manual and also some ATS reviews nor famous filters mods from NR4E. Also I added the RTTY mod as I found on the net. In Photos section You can find also few ATS beauties from net. I hope it should be usefull for all ATS enthusiasts during the building their "diamond"...

72, Petr OK1RP

BTW: does anybody know how much of the ATS (all versions) has been hooked up on the air already? As I did not find s/n so maybe only Steve know it? :) Specially in EU should be interesting as there is much more troubles with SWBC from strong stations.

90. ATS-3A firmware mods

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-04 16:57:47 UTC
From: Dave
Topic: 90 Message: 90

I got the Olimex debugging cable in the mail yesterday, but didn't want to mess up the operation of my ATS-3A until after the Spartan Sprint yesterday, so I didn't try loading new firmware into the processor until today. Seems to work fine from my Win98 laptop machine, but on my desktop WinXP machine I keep getting a "port in use" message when I try to initiate debug mode. Perhaps there is a conflict with the drivers for the other JTAG programming drivers I use for other applications, I don't know. But to rationalize, I think I like having the debugger on the laptop anyway.

I noticed from looking at the original firmware source that there are some quirks in the tuning functions with regard to band limit checking (I guess these checks are not present in the ATS-3, so this is new stuff). Under some circumstances, the original code will allow you to tune up or down 0.5 kHz to 1.0 kHz outside the band and direct frequency entry will allow you to get to some places outside the band as well. So I think I've fixed all of those things for normal tuning mode (I haven't checked anything for split-tuning mode yet) and am testing it now.

Since so far I'm inept at using the keyer, I'm also playing with an added menu function that permits switching on-the-fly between iambic and straight-key modes (straight-key on the Dash paddle). In straight-key mode, dual-paddle operation is still available for all non-transmitting functions such as direct frequency entry. I'm planning on getting a Y cable to allow both the paddles and a computer-controlled keying interface or true straight key to be attached at the same time.

Anyway, thanks go to Mike, W1MT, for his pointers on getting the development environment going.

Dave

91. Another ATS-3A is ready to go-almost

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-04 18:20:07 UTC
From: John [K7SVV]
Topic: 91 Message: 91

Mine is built to the point where I can get on 20 & 30m as soon as the shuttle is launched. Once the launch is complete you should hear some CQ's on 20 & 30.

John [K7SVV]

Sneak preview the all-new Yahoo.com. It's not radically different. Just radically better.

92. Lutz Bergner/DL2HRP 40 m mods to ATS3

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-05 00:13:22 UTC
From: Gil Stacy
Topic: 92 Message: 92
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

93. n0tu's ATS3a smolderins

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-06 00:32:01 UTC
From: Steve/n0tu
Topic: 93 Message: 93

Since our backpacking trip on the CT was postponed because of the monsoons moving into Colorado, I decided to 'let the building begin'. 'Gentlemen ...start your solder irons'

The good news is my 3a now has the uP and DDS chips mounted successfully and in the correct orientation! The bad news is I blew up the tip of Metcal iron when adjusting the magnifier lamp with the solder iron in my hand the tip burned accidentally through the lamp cord and shorted to the ac-mains with a loud POP and flash of light! The Metcal solder station is fine and so is the lamp but the tiny tip is missing!!! Vaporized my friends! Gone off the end of the cartridge? Lesson learned -- when not using the iron place it back in the holder DO NOT leave it in your hand. I see DigiKey sells the tips for 22+bux plus shipping (ouch). Since I've got U7 under my belt (pic in file) I may just switch to the Weller WP25 which cost me $30 for the whole works! Those dagum Metcal tips are expensive fireworks!

Steve/n0tu

94. Re: ATS-3A firmware mods

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-06 02:29:58 UTC
From: Dave
Topic: 90 Message: 94

--- In AT_Sprint@yahoogroups.com, "Dave" <dmertz@...> wrote:
> the original code will allow you to tune up or down 0.5 kHz
> to 1.0 kHz outside the band

Sorry, that should have been: the original code will allow you to tune
up or down 50 Hz to 100 Hz outside the band

I got the decimal point wrong.

Dave

95. I'm so close I can taste it!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-06 10:54:34 UTC
From: Roland Whitsitt
Topic: 95 Message: 95

Just awaiting 4 SIP pins for the filter boards. They were missing
from the kit. I did the first smoke test and was relieved to hear the
"20M"! Did as much as I could do without the filter boards or other
recomended equipment. I've got the tin drilled and fit tested.
Almost got it right on the first try. The next one ought to be it.
The template threw me off with it being "printed side down". hmmm
Can't see it that way. Mostly the holes are close. But the positive
post on the antenna is touching antenna ground so I got to change
that, which means start over. Or live with a ventilation hole. hi hi
Wondering who my 1st qso will be with. It's 4 am and I should be in
bed but I've just been looking at this thing over and over. It's so cool!
73's

96. Caps are all on....

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-06 11:07:44 UTC
From: Jeffrey Embry
Topic: 96 Message: 96

Last nite, with recovering fingers from an earlier burn, I got all the capacitors on the board. Not much left to do. I will do more tonite and tomorrow night and hopefully will be done and on the air early next week.

So far this is a great little kit. Having fun with it...except for the burn I took on Sunday when I grabbed the wrong end of the soldering iron.

--
Jeff Embry, K3OQ
FM19je
ARCI #11643
FPQRP #-696
NAQCC #25
AMSAT LM-2263

No trees were harmed in the sending of this message, however a large number of electrons were terribly inconvenienced.

97. Re: [AT_Sprint] I'm so close I can taste it!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-06 13:04:44 UTC
From: Michael Harnage
Topic: 95 Message: 97

That's great!!! My kit was missing the sip pins too,
but I had some already so was able to continue and
finish.

Regarding calibration, if you have Spetrogram, or
Spectran, or baudline (for linux guys) you can do the
alignment with just another receiver, your computer
and optionally a noise generator (antenna works too).
See my website for instructions. It will set you up
dead on both frequency "CF" and oscillator "CO". Once
you get the hang of it you can do it in minutes.
(<http://w1mt.qrpradio.com/ats3calibration.html>)

One note, turning the trimmer cap on the main board
will move the passband up or down -- with the computer
display and a noise generator it is real easy to put
it right where you want it (around 600Hz). Then you
are ready to do the rest of the calibration procedure.
(I will change the website to reflect this sometime
this week.)

-mike/w1mt

--- Roland Whitsitt <n5vwn@...> wrote:

> Just awaiting 4 SIP pins for the filter boards.
> They were missing
> from the kit. I did the first smoke test and was
> relieved to hear the
> "20M"! Did as much as I could do without the filter
> boards or other
> recomended equipment.

_____
Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

98. Welcome Moderator!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-06 17:43:33 UTC
From: Roland Whitsitt
Topic: 98 Message: 98

A warm welcome to a new moderator W1MT Michael. There's a new sherriff in town. hi hi Great, now I can go camping and new pending members don't have to wait. We needed the overlap.
n5vwn

99. Re: [AT_Sprint] Welcome Moderator!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-06 18:20:41 UTC
From: Jeffrey Embry
Topic: 98 Message: 99

Welcome Mike.

--
Jeff Embry, K3OQ
FM19je
ARCI #11643
FPQRP #-696
NAQCC #25
AMSAT LM-2263

No trees were harmed in the sending of this message, however a large
number of electrons were terribly inconvenienced.

On 7/6/06, Roland Whitsitt <n5vwn@...> wrote:
> A warm welcome to a new moderator W1MT Michael. There's a new
> sherriff in town. hi hi Great, now I can go camping and new pending
> members don't have to wait. We needed the overlap.
> n5vwn
>
>
>
>
>
>
>
>
> Yahoo! Groups Links
>
>
>
>
>
>
>
>

100. Spartan Sprint Champ among us!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-06 23:57:15 UTC
From: Roland Whitsitt
Topic: 100 Message: 100

Wow, I just happen to run accross this. I'm cut and pasting this from another source.

<<<<Skinny Division Winners -
Mike W1MT won the Skinny division with 22 contacts and an ultra-light .135 pounds. To save weight Mike used the buttons on his ATS3 and no key.

Andy W5ACM took second with 25 QSOs and about a quarter pound. His weight saving this month was lighter earbuds.

Larry was third with his ATS3 and an attic loop antenna. He had 27 contacts on less than a third of a pound.>>>>

That's right folks, our own W1MT won this thing on a microlight ATS3. I'd like to hear his story. And this 3rd place ATS Larry guy. Is he among us? I'd like to hear his story too. Congradulations to both!

Roland N5VWN
flying pig #1100

PS... Here is my source: http://www.ARSqrp.com

101. Other spartan sprinters?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-07 00:23:58 UTC
From: Roland Whitsitt
Topic: 101 Message: 101

I just realized there may very well be others in this group who were in the spartan sprint. Speak up!

102. Re: [AT_Sprint] Spartan Sprint Champ among us!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-07 00:26:24 UTC
From: Michael Harnage
Topic: 100 Message: 102

Well shucks. You can read the continuing saga at:
<http://w1mt.qrpradio.com/ats3-lighten.html>

Basically, it is a game with specific rules (you can read about them at the Adventure Radio Society website) that a few of us like to play. The score is essentially number of qso's divided by your station weight. Some of us have gotten the weight down pretty low (under 2 ounces for instance). As you can imagine it does not take too many q's to get a high score with a very low weight. Still it is fun and I am at the stage where saving 0.001 pound can help.

Check out nn4cw's photos of his rig in the photo section of the AT_Sprint site. He is using carbon fibre veneer as his enclosure. He is on this list and has won Sprint or two. I believe that N7SR is on this list too and he has won before, too.

One thing you will notice is that to place in the top 3 to 7 places you pretty much have to be using an ATS3 rig (the ATS3A should work fine too). Most of the top guys are using lipo batteries as well.

My antenna is not very good so I do what I can with the propagation given me, but look a few months back to see what k3ese did with a decent antenna and a tricked out ATS3.
<http://www.arsqrp.com/ars/pages/spartan_sprints/2006_sprints/0306ss.html>

73 de w1mt
mike

--- Roland Whitsitt <n5vwn@...> wrote:

> I'd like to hear his story.

Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

103. Re: [AT_Sprint] Other spartan sprinters?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-07 01:23:54 UTC
From: Jeff Embry (K3OQ)
Topic: 101 Message: 103

I was there using my KX-1. The ATS3a will be ready for next month. Tonite I finished all the SMT parts and got a good start on the remainder of the parts. Given my working hours ... about an hour and a half or so at a shot is all I can handle to put it together.

BTW Roland...I didn't realize you were a "Proud Porker". I am Flying Pig #-696. Hope to hear you in the Run For the Bacon later this month. Should have the ATS3a ready by then.

72 es oo

--
Jeff Embry, K3OQ
FM19je
ARCI #11643
FPQRP #-696
NAQCC #25
AMSAT LM-2263

No trees were harmed in the sending of this message, however a large number of electrons were terribly inconvenienced.

Roland Whitsitt wrote:

>I just realized there may very well be others in this group who were
>in the spartan sprint. Speak up!
>
>
>
>
>
>
>
>Yahoo! Groups Links
>
>
>
>
>
>
>
>
>
>

104. 40M ATS-3A action

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-07 06:23:33 UTC
From: Kurt
Topic: 104 Message: 104

I made a few contacts on 40m tonight, and I spent a good portion of my time trying to break through a log jam for a guy in Cuba, CO6YVC...a pretty futile effort...but you never know...he was definitely a 599 for me.

I think I can safely say that my ATS-3A is working...and working well. I still need to finish
building the 80m module, but I should get that done this weekend.

I also need to get it in a case. I have decided to avoid the altoids boxes. They are cute, but they are a pain to drill...and the cover hinges wear out quick in my opinion.

I'm going to follow W1MT's lead and make a little wooden box for it. I'll give the box a spray job and maybe even a bit of art work for good measure. I kind of like the mixing of low tech and high tech. If the finished product isn't too embarassing, I'll post a pic here.

Regards,

Kurt - ae6uj

105. Tactile switch information

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-07 12:18:37 UTC
From: Michael Harnage
Topic: 104 Message: 105

Kurt's recent post about packaging the ATS rigs made
me think of this. The button switches that are
supplied with the ATS3 and ATS3A rigs are 6x6x7
tactile buttons. The ones at
<http://www.mouser.com/catalog/626/1184.pdf> that
match figure D are equivalent, if not the same ones,
that Steve puts in the kits. You have your choice of
tactile resistance (I am partial to the light touch
ones -- 100g). Red colored buttons tend to be the
stiffest, brown or black are typically lighter.

If you package your rig in anything thicker than an
Altoids tin or very thin sheet of wood (1/32") you
will need taller buttons. For 1/8" thick wood I would
recommend the 6x6x9.5 size.

If you do replace them on your board snip the old ones
off and remove the soldered legs one at a time from
the board then clean the holes and replace. It is
easier than trying to save the old buttons.

Btw, the ATS2 used the 6x6x13 size buttons.

73 de w1mt
mike

_____
Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

106. Re: Other spartan sprinters?...ONCE WITH ROCK MITE 20- N4EO

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-07 13:29:11 UTC
From: n4eo
Topic: 101 Message: 106

I won Skinny Div once with Rock Mite 20, but those days are gone.
Was using 4 L Yagi at 120 feet, but that wasn't in the weight formula!
Getting a Korean repack of a dying FT-817 battery pack overnight.
Will be stocked with Sony 2700 mAh AA's by professional shop. Their
reputation is good and the quoted PRICE IS GREAT!

Wife and I tour DMZ within artillery range of Seoul tomorrow (Sat).

72,
Jerry N4EO/KH6 es HL9EO
Seoul

--- In AT_Sprint@yahoogroups.com, "Roland Whitsitt" <n5vwn@...> wrote:

I just realized there may very well be others in this group who were
in the spartan sprint. Speak up!

107. Re: Other spartan sprinters?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-07 13:48:46 UTC
From: Dave
Topic: 101 Message: 107

You'll notice that I, with my ATS-3A (0.3 lbs) and Jeff with his KX1 (1.125 lbs) tied despite my having only 4 contacts to Jeff's 15. Obviously low weight is key and Mike has taken that to the extreme. Next month I'll be in better shape with a 0.05 lbs reduction with my new carbon fiber case ($10 worth of 0.025" carbon fiber plate, balsa bottom and about 7 hours, nearly as much time than I spent on the rest of the rig) and I should be using a Li-Po battery as well. That should bring me to under 0.200 lbs if I use buttons as keys.

Dave

108. Re: [AT_Sprint] Re: Other spartan sprinters?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-07 15:35:04 UTC
From: ron
Topic: 101 Message: 108

that's what I call, "bragging rights" :)

good luck on the nx sprint!

Ron wb1hga

Dave wrote:
> You'll notice that I, with my ATS-3A (0.3 lbs) and Jeff with his KX1
> (1.125 lbs) tied despite my having only 4 contacts to Jeff's 15.
> Obviously low weight is key and Mike has taken that to the extreme.
> Next month I'll be in better shape with a 0.05 lbs reduction with my
> new carbon fiber case ($10 worth of 0.025" carbon fiber plate, balsa
> bottom and about 7 hours, nearly as much time than I spent on the rest
> of the rig) and I should be using a Li-Po battery as well. That
> should bring me to under 0.200 lbs if I use buttons as keys.

109. Changing band modules with the power on

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-07 19:31:58 UTC
From: Kurt
Topic: 109 Message: 109

Can you change band modules without powering down the ATS? I have been too afraid to try. Will it autosense the module and then give the band name call ("20M," as an example) that it does when powering up?

I'll try too it if someone else goes first a few times. ;)

Kurt - ae6uj

110. Re: Tactile switch information

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-07 19:27:18 UTC
From: Kurt
Topic: 104 Message: 110

One alternative to getting taller buttons is to use a large drill bit to recess the wood slightly around the button hole. This would allow the finger tip to toggle the button even though the button is shorter than the box's top surface. Another advantage of this method is that you would be able to have the box turned over and set it down on its top...but not be toggling any buttons, as they would be recessed.

I may need to use this method on my box. I think with the wood I got, the buttons will be flush with the top of the box...so I will need to recess the wood around them a bit. By the way, I bought a sheet of hobby wood (not balsa) for 99 cents...much cheaper than the altoids I would never eat...and, structurally, far stronger.

Regards,

Kurt - ae6uj

--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:

> If you package your rig in anything thicker than an
> Altoids tin or very thin sheet of wood (1/32") you
> will need taller buttons. For 1/8" thick wood I would
> recommend the 6x6x9.5 size.
>

111. Re: [AT_Sprint] Re: Other spartan sprinters?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-07 20:04:09 UTC
From: Gil Stacy
Topic: 101 Message: 111
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

112. Re: [AT_Sprint] Changing band modules with the power on

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-07 21:11:50 UTC
From: Michael Harnage
Topic: 109 Message: 112

Yes, you can change filter boards. Won't hurt the rig. I have done it many times. :) You can tweak the coils and put the same filter board back in to get a little more (or less, I suppose) power out without powering down. Steve recommends this procedure in the manual.

You can even switch filter modules BUT, no, it won't sense the band change. The dds will still be set to the old band while the filter hardware is set for a different band. With my code you could qsy to the new band/freq and continue but in practice I just repower the rig.

The test for which band is plugged in is done once only during power up. Both Steve's and my version of the firmware operate the same for this function.

If one wanted, the code could be altered to sense when a change is made but there are other considerations. Such as, no filter board is sensed the same as the 20M filter board. Also, do you "remember what freqs you were at on the old bands so that if you put an old band back in do you go back to the old freq or act like a power up and reset teh freq to the default startup freq? Probably a few more things too. This would be low on my list of things to do in the code. There is a limited amount of code space and mine is near the limit. My coding for this rig seems to go in cycles, gain some code space by rewriting current stuff, then adding new stuff, repeat. There are a couple of things I am thinking about so I am comtemplating entering the save code space cycle again. :)

mike/w1mt

--- Kurt <ae6uj@...> wrote:

> Can you change band modules without powering down
> the ATS? I have been
> too afraid to try. Will it autosense the module and
> then give the band
> name call ("20M," as an example) that it does when
> powering up?
>
> I'll try too it if someone else goes first a few

> times. ;)
>

Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

114. Hit my first snag

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-09 14:03:21 UTC
From: Roland Whitsitt
Topic: 114 Message: 114

Well gang, I hit my first problem. When I power up I do get the cw messages and the menu system works fine. But no audio from stations. I don't hear anything. Also no output power. Haven't even had time to do any trouble shooting as I had to go to work. About all I did was flex the board a bit to see if something loose might make contact and also pushed down a little on all the chips legs. No luck yet. Me feels that maybe me shorted some of those tiniest legs on U8. It could be the two 612s also. Anyways, I'm on this 12 hour graveyard shift right now, so when I get home and get some sleep, I'll do those voltage checks. That may point me in the right direction. The last thing I want to do is send it in to Steven to fix. That would pull the attraction from the rig for me. I'm certain it's a soldering issue. I know I used to much. Wish me luck!
73's

115. Re: [AT_Sprint] Hit my first snag

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-09 14:41:47 UTC
From: Gil Stacy
Topic: 114 Message: 115
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

116. Re: Hit my first snag

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-09 20:29:20 UTC
From: Kurt
Topic: 114 Message: 116

Hello Rolland,

Sorry to hear you are having trouble. It sounds like you hear the sidetone...which is good news. Were you able to do any of the calibration checkouts on pages 20 and 21? You put L3 in too right? (Dumb question...but had to ask.)

I wouldn't be afraid of contacting Steve for help. He has always been quite responsive to any questions I've ever had. Not only is he a design genius, but he is brilliant at debugging build issues too. (I believe he has been the debug guy for SW plus radios too for many years.) Just be specific and complete on your info to him so he can better help. (Or you can take your chances with us blokes here. I know which I would choose.)

Incidently, I usually hook my new rigs to a signal generator before I even put them on air to listen for signals. If I don't hear the signal from a generator, I ain't gonna hear a station. I also prefer using a generator and 0-scope for tweaking the band modules...takes the subjectivity out...but the 0-scope is not necessary.

An adequate signal generator for anything I've ever done is sold by norcal for around 7 bucks...and takes about 15 minutes to build.

http://www.norcalqrp.org/VE3DNLmarkergenerator.htm

Best of luck,

Kurt - ae6uj

--- In AT_Sprint@yahoogroups.com, "Roland Whitsitt" <n5vwn@...> wrote:
>
> Well gang, I hit my first problem. When I power up I do get the cw
> messages and the menu system works fine. But no audio from stations.
> I don't hear anything. Also no output power. Haven't even had time
> to do any trouble shooting as I had to go to work. About all I did
> was flex the board a bit to see if something loose might make contact
> and also pushed down a little on all the chips legs. No luck yet. Me
> feels that maybe me shorted some of those tiniest legs on U8. It
> could be the two 612s also. Anyways, I'm on this 12 hour graveyard
> shift right now, so when I get home and get some sleep, I'll do those
> voltage checks. That may point me in the right direction. The last
> thing I want to do is send it in to Steven to fix. That would pull
> the attraction from the rig for me. I'm certain it's a soldering
> issue. I know I used to much. Wish me luck!
> 73's
>

117. Re: Changing band modules with the power on

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-09 20:55:24 UTC
From: Kurt
Topic: 109 Message: 117

Nice to know it is safe. I was powering down the unit when I tweaked the coil spacings...definitely slowed things down. I should have read the manual more carefully...now I see the note on removing the module with the power on to tweak these.

As far as an autosense function...it would definitely be a nice to have but not really a need
to have. I do want to install a switch on my power cable...I expect I'll wear the connector out if I don't...seems like I'm always turing this thing on and off.

Request: If you do add an autosense function ever, I think it would be adequate to just reset back to the startup freq for the band module. An autosense would be nice if you ever packaged the unit with a switch for selecting the different bands (somehing I've been debating in the back of my mind). After winding these evil toroids, I am worried that one day all the handling will cause the leads to eventually fail...requiring me to wind a new toroid. Once was enough...thank you.

Regards,

ae7uj

--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:

> If one wanted, the code could be altered to sense when
> a change is made but there are other considerations.
> Such as, no filter board is sensed the same as the
> 20M filter board. Also, do you "remember what freqs
> you were at on the old bands so that if you put an
> old band back in do you go back to the old freq or act
> like a power up and reset teh freq to the default
> startup freq? Probably a few more things too. This
> would be low on my list of things to do in the code.
> There is a limited amount of code space and mine is
> near the limit. My coding for this rig seems to go in
> cycles, gain some code space by rewriting current
> stuff, then adding new stuff, repeat. There are a
> couple of things I am thinking about so I am
> comtemplating entering the save code space cycle
> again. :)
>
> mike/w1mt
>
>
>
> --- Kurt <ae6uj@...> wrote:
>
> > Can you change band modules without powering down

> > the ATS? I have been
> > too afraid to try. Will it autosense the module and
> > then give the band
> > name call ("20M," as an example) that it does when
> > powering up?
> >
> > I'll try too it if someone else goes first a few
> > times. ;)
> >
>
> _____
> Do You Yahoo!?
> Tired of spam? Yahoo! Mail has the best spam protection around
> http://mail.yahoo.com
>

118. Re: [AT_Sprint] Re: Hit my first snag

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-09 21:08:14 UTC
From: Michael Harnage
Topic: 114 Message: 118

L3 is a great place to look. I wondered how many might forget to put it back in before moving on to calibration etc. Also, another dumb question but you did have a filter board plugged in, right?

I once have a ATS rig that had no sound so the second thing I did was reflow all the joints in the audio path again with the soldering iron. The first thing was a visual inspection under magnification. The reflow worked.

During the visual inspection make triple sure that all the IC components and diodes are inserted correctly polarity wise and in the correct spot.

My money is on a loose connection somewhere.

-mike/w1mt

--- Kurt <ae6uj@...> wrote:
You put
> L3 in too right? (Dumb question...but had to ask.)
>
> An adequate signal generator for anything I've ever
> done is sold by norcal for around 7
> bucks...and takes about 15 minutes to build.
>

Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

119. ATS files added

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-10 13:42:17 UTC
From: Petr Ourednik
Topic: 119 Message: 119

Folks,

I added some of usable files regarding the ATS rigs I hope...

You can find the ATS diagramm as I found on the net (older version),
also some of reviews from field operation and finally the mods of
filters etc.

Should be helpful in case of building nor adjusting of Your ATS.

Best regards,

Petr, OK1RP

BTW: did somebody thought about the switching the band modules on-line
w/o changing the modules? (of course solution will not be so small and
light as original t-shirt ATS :)

120. Re: [AT_Sprint] ATS files added

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-10 15:54:28 UTC
From: Michael Harnage
Topic: 119 Message: 120

Yes it has been one of my ideas to do this for over a
year.....

One idea is to put all the filters on one board and
have that board interaface thru the current 7 pin
header. This would mean several relays on the big
filter board (4 at a minimum, I think) and a way to
communicate to the board. Currently two port lines are
available for the board (the same two lines that are
used to sense the current filter boards). A two-line
interface could be utilized to control the big filter
board.

I have never put this together as then the rig starts
getting bigger and more complicated.

--- Petr Ourednik <indians@...> wrote:

>
> BTW: did somebody thought about the switching the
> band modules on-line
> w/o changing the modules? (of course solution will
> not be so small and
> light as original t-shirt ATS :)
>

_____
Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

121. Re: Hit my first snag

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-10 19:44:29 UTC
From: Dave
Topic: 114 Message: 121

After the visual inspection, yOu might start by assuming that both the receiver and transmitter problems are due to the same cause. Besides the microcontroller and the 5V supply (which seem to be working fine since you hear the sidetone), the DDS chip is the only thing I see in common. I would reallly look closely at the pis of that chip and its three connections to the microprocessor. Check for a valid LO frequency.

Dave, WA3OFF

122. ATS-3 (not 3A) main board completed

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-10 20:00:50 UTC
From: n0hj
Topic: 122 Message: 122

This didn't make it to the group last night - could be an issue with my membership (has happened before). Anyway, thought I'd post online.

Greetings All,

Thought I'd post an update - photo also included in my project tin photo section. I worked on and completed the main board this weekend. Only launched two components - a small cap and small resistor. One landed within my cooking pan tray and the other landed on the concrete basement floor. Luckily I was able to locate both of them.
Also, with the ATS-3, the power connector that came with the kit is not the one the board was designed for (one of those "no longer available" parts), so I fiddled with the tabs to solder them to the main board, adding some strength. I am not sure what the rear of the ATS-3A looks like (haven't ordered mine yet) but the ATS-3 has a small cap from the 12v connection to ground just on the other side of the board from the power connector. If you have an ATS-3, it may be a good idea to wait until you mount the power connector before you mount this small cap - I gorrilla'd the connector and ended up snapping off the cap on the rear of the board. Fortunately, since I did NR4E's receiver mods in conjunction with the initial build, I had a spare cap available.

Also, you will note that I added the older ATS-style pushbuttons to the top of the board - my case (see batman tin photos) is designed so that the board is mounted similar to the older ATS MkI with all button and module access from the top - I will not provide access to the rear of the board at all - underneath, the ATS-3 will house my battery pack (in the bottom tin section).

Finally, I had some old boards from an old Sony TV and they had some nice 7 pin connectors and matching cabling, so I pulled one from a board and installed it as the programming connector. A simple cable adapter from this connector to a JTAG cable will provide for reprogramming the CPU. I may just reverse the button programming, too, so the order matches the standard button configuration.

Next, to the modules and then the smoke test.

72 - john - n0hj

123. ATS-3 (not 3A) main board completed

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-10 01:28:34 UTC
From: John A. Evans - N0HJ
Topic: 114 Message: 123

Greetings All,

Thought I'd post an update - photo also included in my project tin photo section. I worked on and completed the main board this weekend. Only launched two components - a small cap and small resistor. One landed within my cooking pan tray and the other landed on the concrete basement floor. Luckily I was able to locate both of them.

Also, with the ATS-3, the power connector that came with the kit is not the one the board was designed for (one of those "no longer available" parts), so I fiddled with the tabs to solder them to the main board, adding some strength. I am not sure what the rear of the ATS-3A looks like (haven't ordered mine yet) but the ATS-3 has a small cap from the 12v connection to ground just on the other side of the board from the power connector. If you have an ATS-3, it may be a good idea to wait until you mount the power connector before you mount this small cap - I gorrilla'd the connector and ended up snapping off the cap on the rear of the board. Fortunately, since I did NR4E's receiver mods in conjunction with the initial build, I had a spare cap available.

Also, you will note that I added the older ATS-style pushbuttons to the top of the board - my case (see batman tin photos) is designed so that the board is mounted similar to the older ATS MkI with all button and module access from the top - I will not provide access to the rear of the board at all - underneath, the ATS-3 will house my battery pack (in the bottom tin section).

Finally, I had some old boards from an old Sony TV and they had some nice 7 pin connectors and matching cabling, so I pulled one from a board and installed it as the programming connector. A simple cable adapter from this connector to a JTAG cable will provide for reprogramming the CPU. I may just reverse the button programming, too, so the order matches the standard button configuration.

Next, to the modules and then the smoke test.

72 - john - n0hj

124. Re: Hit my first snag: an update

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-11 08:21:11 UTC
From: Roland Whitsitt
Topic: 114 Message: 124

I had a scare. My XYL caught my 2 year old son walking around with the raw ATS3a that had been on the bench. (not in the shell) Electro static doom! At least
I was thinking that. But when I put power to it. I could hear it singing the "20M" song. Whewww!

I've gone through all the voltage checks. Everything is either spot on or very close. On the U7 DDS chip though I have 4 suspect cold solder joints. I get voltage only when I hold the pin-probe with a little force. When I started, I did a quick check on pin 1 on U7 and didn't get anything. I then check other pins on the same chip with zero. That's when I backed up and started down the whole list from page 23 of the ATS3a manual. U7 was the last chip on the page only this time I was getting volts. Just those 4 suspect spots. Ran out of time and had to go to work! At least I know the big stuff isn't fried. Can't wait to get back home from this graveyard shift and heat up those four pins. Now I had the headphones on the whole time and didn't really hear anything while doing checks on U7. I did hear a bit of static on a couple of pins on U1 & 2.

125. New poll for AT_Sprint

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-11 08:36:43 UTC
From: AT_Sprint@yahoogroups.com
Topic: 125 Message: 125

Enter your vote today! A new poll has been created for the
AT_Sprint group:

What is the percentage your ATS rig gets used compared to your other HF rigs?

o 90% to 100% of the time
o 75% to 89%
o 50% to 74%
o 25% to 50%
o less than 25%

To vote, please visit the following web page:
http://groups.yahoo.com/group/AT_Sprint/surveys?id=2278887

Note: Please do not reply to this message. Poll votes are
not collected via email. To vote, you must go to the Yahoo! Groups
web site listed above.

Thanks!

126. Almost there

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-11 14:01:41 UTC
From: fixnwrtr
Topic: 126 Message: 126

Over the weekend I received most of my tools and last night I got the solder station. All I'm waiting for now is my ATS-3. I'm getting a little excited, especially reading all the rest of your posts about building your boards and figuring out enclosures.

As always...

Jackie AC0CA

127. Re: ATS-3 (not 3A) main board completed

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-11 14:44:13 UTC
From: n0hj
Topic: 114 Message: 127

I completed the 20m module last night and performed a smoke test. I only had two issues that were solved in short time, but it begs a question of those in the know. I had two components that were cracked (I discovered this while reheating connections). I know I may have stressed the board installing the power connector, but it doesn't seem likely that would have cracked these components (two caps on opposite ends of the board). Could I be overheating the components? I usually run my soldering station at slightly under 700 degrees. Any ideas?? Has anyone else seen cracked caps?? They could merely be separating at the solder ends, too.

Tonight I should be able to finish the remaining modules now that I have a working main board.

tnx es 72 - john - n0hj

128. Re: [AT_Sprint] Re: ATS-3 (not 3A) main board completed

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-11 15:40:33 UTC
From: Michael Harnage
Topic: 114 Message: 128

Early on I noticed that some of the caps or resistors
would loose plating on one side. I would just flip
them over and use the other side. Maybe this is what
happened to yours? I have not had this happen in a few
kits so I think it might be heat related. Never had
one actually crack though.

-mike/w1mt

--- n0hj <jaevans@...> wrote:

> cracked these components (two
> caps on opposite
> ends of the board). Could I be overheating the
> components? I usually
> run my soldering station at slightly under 700
> degrees. Any ideas??
> Has anyone else seen cracked caps?? They could
> merely be separating
> at the solder ends, too.
>

_____
Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

129. Re: ATS-3 (not 3A) main board completed

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-11 17:12:13 UTC
From: n0hj
Topic: 114 Message: 129

Thanks Mike,

Perhaps crack is the wrong word. It may actually be separation at the plating or what looks like the end cap separating. The displayed symptoms are intermittents where pressure at various points on the board results in improvement or worsening of the condition.

At any rate, I had extra parts from N4RE's mods, so was able to fix the issues rapidly. C23 was one culprit - no/low sidetone and the C6 pyramid mod where the 220pf cap separated. I bought two mod kits from him thinking I would get two ATS-3 rigs, but then the ATS-3a came out.

Once completed, I will most likely dig into the assembly code and reverse the order of the switches since I like the original order on my ATS Mk I (recall I mounted the larger red pushbuttons on the top of the board).

tnx much es 72 - john - n0hj

--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:
>
> Early on I noticed that some of the caps or resistors
> would loose plating on one side.
...
>
> -mike/w1mt

130. Re: [AT_Sprint] Re: ATS-3 (not 3A) main board completed

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-11 16:14:47 UTC
From: w9ya@arrl.net
Topic: 114 Message: 130

Hey John and the gang;

Well I try to run my irons between 700 and 750 degrees with most tips. There is a thermal mass to be overcome when soldering, and this temperature range helps to limit the heat the components are subject to.

Running your iron at a lower temperature than the range I use WILL heat stress the components more as you will have to apply heat for a longer time.

You might have also mechanically stressed the components while heating them.

OR....they are/were just bad components. I try to test my components, especially components that contain "liquids" (and such). I use a E.S.R. tester for the electrolytic devices to see if the chemicals are breaking down or are dried out.

Anyways, I hope this small amount of information helps you out some.

Vy 72;

Bob
w9ya

> I completed the 20m module last night and performed a smoke test. I
> only had two issues that were solved in short time, but it begs a
> question of those in the know. I had two components that were cracked
> (I discovered this while reheating connections). I know I may have
> stressed the board installing the power connector, but it doesn't seem
> likely that would have cracked these components (two caps on opposite
> ends of the board). Could I be overheating the components? I usually
> run my soldering station at slightly under 700 degrees. Any ideas??
> Has anyone else seen cracked caps?? They could merely be separating at
> the solder ends, too.
>
> Tonight I should be able to finish the remaining modules now that I have
> a working main board.
>
> tnx es 72 - john - n0hj
/docs.yahoo.com/info/terms/
>

131. Re: [AT_Sprint] Re: ATS-3 (not 3A) main board completed

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-11 18:03:22 UTC
From: Michael Harnage
Topic: 114 Message: 131

Make sense to me.

Btw, the nr4e mods applied the ats3a will probably
only involve the last audio amp stage. Steve changed
the IF filter caps in the middle of the ATS3 runs, the
filter is now terminted, and it looks like he has
changed the 1st stage audio amp immediatly after the
IF crystals as well (f0 looks to be 1023Hz). The only
thing in the nr4e mod that is not done is changing the
last audio amp from bandpass to lowpass and you may or
may not want to do this. I have built mine stock for
now but may change it later so that I can change the
BFO/sidetone to something other than 600Hz (like 400Hz
or 500Hz). I am experimenting with lower sidetone's on
another ATS3 now.

Changing the buttons is easy. They are #define'd early
in the code so all you have to do is change some
#define's and you should be good to go. This should
work for both Steve's and my firmware....

-mike/w1mt
--- n0hj <jaevans@...> wrote:

> Thanks Mike,
>
> Perhaps crack is the wrong word. It may actually
> be separation at
> the plating or what looks like the end cap
> separating. The displayed
> symptoms are intermittents where pressure at various
> points on the
> board results in improvement or worsening of the
> condition.
>
> At any rate, I had extra parts from N4RE's mods,
> so was able to fix
> the issues rapidly. C23 was one culprit - no/low
> sidetone and the C6
> pyramid mod where the 220pf cap separated. I bought
> two mod kits from
> him thinking I would get two ATS-3 rigs, but then
> the ATS-3a came out.
>
> Once completed, I will most likely dig into the
> assembly code and

> reverse the order of the switches since I like the
> original order on
> my ATS Mk I (recall I mounted the larger red
> pushbuttons on the top of
> the board).
>

Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

132. ATS-3 (not 3A) lower sidetone

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-11 18:36:05 UTC
From: Jim Larsen - AL7FS
Topic: 114 Message: 132

Mike, I really would like the sidetone to be nearer to 450 or 500 Hz. Would you share your results with the list and use a very clear descriptive Subject line so I can find it when I need it later?

Please, please. :-)

Thank you.

73, Jim
Jim Larsen
Anchorage, Alaska
http://www.AL7FS.us/

Michael Harnage wrote:
I have built mine stock for
> now but may change it later so that I can change the
> BFO/sidetone to something other than 600Hz (like 400Hz
> or 500Hz). I am experimenting with lower sidetone's on
> another ATS3 now.
>

133. Changing ATS-3 (and ATS2 and ATS3A) sidetones

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-11 18:57:07 UTC
From: Michael Harnage
Topic: 114 Message: 133

Hi Jim et al,

Changing the sidetone on these rigs is a little complicated. Many things had to be changed in the firmware to allow this. Starting with version M36 and for all subsequent versions you can change the sidetone for your ATS rig. This is set when the rig is programmed and is thus (not yet anyways) programmable on the fly. Here is a snippet of the code to show you what sidetones you can choose:

```
;
; Change the SIDETONE_DELAY will affect the sidetone
;
; 27 -> 606Hz default
; 28 -> 585Hz Steve's original choice
; 33 -> 496Hz close enuf to 500Hz
; 37 -> 442Hz for the musician's
; 41 -> 400Hz lowest we dare go
;
; DONT ALTER THIS YET -- OTHER PLACES IN CODE WILL
HAVE TO CHANGE TOO
#define SIDETONE_DELAY 27
```

As you can see it is setup for 606Hz by default but if you change the SIDETONE_DELAY to one of the other numbers you can get other sidetones.

The formula is basically 32768/SIDETONE_DELAY/2. So any value between 27 and 41 could be used. I just picked what I thought would be tones of interest.

Notes:

1. The LO is fixed in version M36. If you choose 400Hz, this means that during CO calibration you will have to add 41 clicks to whatever your calibration clicks were for 606Hz. Hope this makes sense. At some point in the future I will probably make the default LO vary depening on the SIDETONE_DELAY.

2. DO NOT CHANGE YOUR SIDETONE DELAY FROM 27 (OR POSSIBLY 28) UNLESS YOU HAVE DONE THE NR4E IF FILTER MODIFICATIONS. The resaon for this is that the stock audio filter has a bandpass filter set for 600Hz and if you set you sidetone to 400Hz it will just not work properly. The NR4E mod changes the bandpass filter

(last op amp in the audio chain) form bandpass to low
pass and this is necessary for changing the sidetone.

3. This works with my version of the firmware ONLY.

73 de w1mt
mike

--- Jim Larsen - AL7FS <jimlarsen2002@...>
wrote:

> Mike, I really would like the sidetone to be nearer
> to 450 or 500 Hz. Would
> you share your results with the list and use a very
> clear descriptive Subject
> line so I can find it when I need it later?
>

_____
Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

134. Still no luck

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-11 19:39:42 UTC
From: Roland Whitsitt
Topic: 134 Message: 134

All the voltages are ok. I've rewound and tinned and installed L3 I've touched and jiggled about everything. Even took the shotgun approach and re-touched everything with the iron. Hmmmm Still no audio or watts out. Still get audio from the menu though. I don't know if it means anything, but I do get some weak static white noise (like an empty band) when I touch a tiny screwdriver on R1. But I don't hear any signals out there. Maybe time to ask Steve?
Roland

135. Re: [AT_Sprint] Still no luck

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-11 21:29:27 UTC
From: Gil Stacy
Topic: 134 Message: 135
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

136. Re: Still no luck

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-12 10:41:13 UTC
From: Roland Whitsitt
Topic: 134 Message: 136

What value should the capacitor be? I've done 1. through 3.
Roland N5VWN
--- In AT_Sprint@yahoogroups.com, "Gil Stacy" <gilstacy@...> wrote:
>
> Roland,
> Steve is always ready to help.
> Have you:
> 1)done a part by part check off?
> 2)Made sure all IC's and diodes are properly oriented?
> 3)Done the voltage checks in the manual?
> 4)made a simple signal injector by hooking a leaded capacitor to
an antenna
> wire and touched various component leads to deteremine where you
can hear
> signals which can indicate where the breakdown is/isn't?
> It can be frustrating, but when you solve it yourself it's a big
lift.
> Gil NN4CW
>

137. Re: [AT_Sprint] Re: Still no luck

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-12 11:09:17 UTC
From: Gil Stacy
Topic: 134 Message: 137
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

138. Re: [AT_Sprint] Re: Still no luck

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-12 11:23:17 UTC
From: Gil Stacy
Topic: 134 Message: 138
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

139. Re: [AT_Sprint] Re: Still no luck

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-12 12:00:54 UTC
From: Michael Harnage
Topic: 134 Message: 139

Roland,

Does it exhibit this behaviour with all filter boards?

-mike/w1mt

--- Roland Whitsitt <n5vwn@...> wrote:

> What value should the capacitor be? I've done 1.
> through 3.
> Roland N5VWN
> --- In AT_Sprint@yahoogroups.com, "Gil Stacy"
> <gilstacy@...> wrote:
> >
> > Roland,
> > Steve is always ready to help.
> > Have you:
> > 1)done a part by part check off?
> > 2)Made sure all IC's and diodes are properly
> oriented?
> > 3)Done the voltage checks in the manual?
> > 4)made a simple signal injector by hooking a
> leaded capacitor to
> an antenna
> > wire and touched various component leads to
> deteremine where you
> can hear
> > signals which can indicate where the breakdown
> is/isn't?
> > It can be frustrating, but when you solve it
> yourself it's a big
> lift.
> > Gil NN4CW
> >
>
>
>
>
>
>
> ------------------------ Yahoo! Groups Sponsor
> ----------------------~-->
> Check out the new improvements in Yahoo! Groups
> email.
>
http://us.click.yahoo.com/6pRQfA/fOaOAA/yQLSAA/ELTolB/TM

>
---~->
>
>
>
> Yahoo! Groups Links
>
>
> AT_Sprint-unsubscribe@yahoogroups.com
>
>
>
>
>
>

Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

140. Re: [AT_Sprint] Re: Still no luck

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-12 14:13:54 UTC
From: Gil Stacy
Topic: 134 Message: 140
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

141. Re: Still no luck

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-12 16:58:26 UTC
From: Roland Whitsitt
Topic: 134 Message: 141

Mike, The answer to your question is: Yes

Just got off graveyard shift. After I get some rest I might have an hour or so I can spend on the rig. I might try that cap to antenna trick. Did I mention I hear something that sounds like static when I touch my micro screw driver to R1? Of course any path it goes to also exhibits this malady.
I guess the next thing is to try is checking all connections from the DDS and the MCU. There are only a limited amount of parts here so I feel I'll get it sooner or later. I appreciate all the Help!
TU
de N5VWN

--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:
>
> Roland,
>
> Does it exhibit this behaviour with all filter boards?
>
> -mike/w1mt
>

142. Re: [AT_Sprint] Re: Still no luck

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-12 17:33:35 UTC
From: Michael Harnage
Topic: 134 Message: 142

If you get static from R1 all the way back to the
antenna you are likely correct in thinking that the
dds/mpu section has the bug. Let us know what you find
there.

-mike/w1mt

--- Roland Whitsitt <n5vwn@...> wrote:

> Mike, The answer to your question is: Yes
>
> Just got off graveyard shift. After I get some rest
> I might have an
> hour or so I can spend on the rig. I might try that
> cap to antenna
> trick. Did I mention I hear something that sounds
> like static when I
> touch my micro screw driver to R1? Of course any
> path it goes to also
> exhibits this malady.

_____
Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

143. ATS-3A calibration

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-12 20:10:04 UTC
From: mertzdave
Topic: 143 Message: 143

Let me know if you think this calibration method is valid. It requires only the audio spectrum display on a PC (I'm using HamScope):

1. Install the 20M band module and attach an antenna to the ATS-3A.

2. Initiate calibtaion by holding the Split and Up buttons at power up until "CF" is sounded. Press the Menu button to skip the reference-oscillator calibration for now. "CO" is sounded.

3. Perform the LO frequency trim, noting the net adjustment from default ("up" presses minus "down" presses) so you can restore this setting easily and precisely. Measure and record the frequency of the audio peak. Press the menu to store this LO offset. "20M" is sounded.

4. Immediately press and hold the Menu button until "E" is sounded and then release to enter Direct-Frequency-Entry mode. Use the keyer paddles to enter "9999", setting the frequency to 14.999900 MHz (a bug in the band limit checking permits this). Press the Up button twice to move to an indicated 15.000000 MHz. You should hear WWV.

5. Measure the audio frequency of WWV's carrier beat note. Subtract from this the audio frequency recorded in step 3. This is the reference oscillator's calibration error.

6. Remove power form the ATS-3A

7. Again initiate calibtaion by holding the Split and Up buttons at power up.

8. Divide the reference-oscillator's error by 3. This is the number of button presses needed to adjust the reference. If the audio frequency of WWV was above that of the LO, press the Down button otherwise press the Up button this many times.

9. Press the Menu button to move to LO trim. Restore the previously-determined LO trim value by using the Up or Down button. Do not change the setting of the BFO trimmer cap. If needed, Use the Up or Down buttons to adjust the tone to the same audio frequency as before (or as close as possible).

10. Press the Menu button to save the calibration. Again tune in WWV (don't forget the two Up-button presses to tune up from 14.999900 to 15.000000 MHz) and check the audio frequency again. It should now be the same as the LO trim-check tone. If not, try

again with a slightly different reference calibration adjustment.

Note: The calibration reverts to default at the beginning of each calibration sequence.

My adjustments were 5 Down for the reference adjustment and 3 Up for the LO trim.

I'm not sure why the divide by 3 in the calculation. I thought it would have been a divide by 2, but that adjusted too far for me. Also, I thought the LO trim calibration should change with a change to the reference calibration, but I did not really notice any (would have only been a 5 Hz change anyway, I think, so I just might not have noticed). The main idea is to get the beat note of WWV to be the same audio frequency as that of the LO calibration tone.

Anyway, let me know if I went wrong somewhere.

Dave, WA3OFF

144. Re: [AT_Sprint] ATS-3A calibration

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-12 20:41:52 UTC
From: Michael Harnage
Topic: 143 Message: 144

Have a look here, it may be easier.

<http://w1mt.qrpradio.com/ats3calibration.html>

Method in the link does not require a filter module.

More comments inline below.

--- mertzdave <dmertz@...> wrote:

>
> I'm not sure why the divide by 3 in the calculation.
> I thought it
> would have been a divide by 2, but that adjusted too
> far for me.

50MHz divided by 15MHz = 3.333 (more accurate)

I use 10MHz WWV as a check. With the 30M filter and my
firmware I can DFE right to 10.000000MHz and hear the
carrier right on my sidetone pitch. Also, can see it
on the screen with the right audio spectrum software.

> Also, I thought the LO trim calibration should
> change with a
> change to the reference calibration, but I did not
> really notice
> any (would have only been a 5 Hz change anyway, I
> think, so I just
> might not have noticed).

CF affects only the 50MHz dds oscillator calculations.
CO changes the BFO freq used to determine the receive
offset. One does not affect the other.

-mike/w1mt

_____
Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

145. Re: ATS-3A calibration

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-12 22:44:05 UTC
From: Dave
Topic: 143 Message: 145

> Method in the link does not require a filter module.

But it does require a separate receiver, which I do not have, so I wanted to work up something else that only required matching the tones.

> 50MHz divided by 15MHz = 3.333 (more accurate)

The step size of the adjustment to the reference is 10 (0.00002%). The LO frequency when tuned to 15 MHz is about 10 MHz, so a 0.00002% change in the reference value should produce a change in the LO frequency of about 2 Hz. I guess I still don't understand why what I think is a 2 Hz change in LO frequency doesn't seem to move WWV's beat note by 2 Hz also. Remember, about 5 Mhz of the total of 15 is controlled by the crystal connected to the BFO trim cap and will be unaffected by a change in the reference value. I don't think 50/15 applies. But then I still have a mystery (to me).

> I use 10MHz WWV as a check. With the 30M filter and my
> firmware I can DFE right to 10.000000MHz

Ah, true, the original code has no lower limit check, so I can do the same. Just beware that the original code does not zero the 10s digit of the frequency, so don't use the Up or Down buttons before DFEing straight to 10.000000 MHz.

I'll have to compare and see that the beat note from WWV on received on 15 MHz is the same as that received on 10 MHz. It better be, otherwise I'll need to re-think this. Using WWV on 10 MHz should require a different amount (twice the amount, I think) of adjustment for each 1 Hz difference in audio tone.

> CF affects only the 50MHz dds oscillator calculations.
> CO changes the BFO freq used to determine the receive
> offset. One does not affect the other.

You are right. I was thinking like I was adjusting the oscillator, not just the number used to calculate the DDS frequency register value (and is not used to adjust the value put in the DDS frequency register for the LO trim adjustment procedure). Duh.

So I think my procedure is still valid since I think it's essentially comparing the beat note of a signal from a precise 15 MHz reference with that of a "signal" on exactly 0 MHz.

Dave, WA3OFF

146. Re: [AT_Sprint] ATS-3A calibration

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-12 22:42:26 UTC
From: Michael Harnage
Topic: 143 Message: 146

Here is a good link:
<http://w1mt.qrpradio.com/ats3calibration.html>

I hope.

-mike/w1mt

--- Michael Harnage <w1mt@...> wrote:

> Have a look here, it may be easier.
>
> <http://w1mt.qrpradio.com/ats3calibration.html>
>
> Method in the link does not require a filter module.
>
> More comments inline below.
>
>
> --- mertzdave <dmertz@...> wrote:
>
> >
> > I'm not sure why the divide by 3 in the
> calculation.
> > I thought it
> > would have been a divide by 2, but that adjusted
> too
> > far for me.
>
> 50MHz divided by 15MHz = 3.333 (more accurate)
>
> I use 10MHz WWV as a check. With the 30M filter and
> my
> firmware I can DFE right to 10.000000MHz and hear
> the
> carrier right on my sidetone pitch. Also, can see it
> on the screen with the right audio spectrum
> software.
>
> > Also, I thought the LO trim calibration should
> > change with a
> > change to the reference calibration, but I did not
> > really notice
> > any (would have only been a 5 Hz change anyway, I
> > think, so I just
> > might not have noticed).
>

>
> CF affects only the 50MHz dds oscillator
> calculations.
> CO changes the BFO freq used to determine the
> receive
> offset. One does not affect the other.
>
> -mike/w1mt
>
>
> _____
> Do You Yahoo!?
> Tired of spam? Yahoo! Mail has the best spam
> protection around
> http://mail.yahoo.com
>
>
>
> Yahoo! Groups Links
>
>
> AT_Sprint-unsubscribe@yahoogroups.com
>
>
>
>
>
>
>
> _____
> Do You Yahoo!?
> Tired of spam? Yahoo! Mail has the best spam protection around
> http://mail.yahoo.com

147. Re: ATS-3A calibration

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-12 23:05:47 UTC
From: Dave
Topic: 143 Message: 147

> I'll have to compare and see that the beat note from WWV on
> received on 15 MHz is the same as that received on 10 MHz.

And it is.

This implies another method for determining the reference error that is completely independent of the LO trim and can be checked without disturbing the existing calibration. It effectively compares WWV 15 MHz minus WWV 10 MHz (which is precisely 5 MHz) to the LO tuned to receive 15 MHz minus LO tuned to receive 10 MHz (which is 5 MHz plus error).

Dave, WA3OFF

148. Re: [AT_Sprint] Re: ATS-3A calibration

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-12 23:44:06 UTC
From: Michael Harnage
Topic: 143 Message: 148

It does apply. Remember that only the tx freq is calculated with the CF constant. The rx freq is calculated with a simple subtraction (or addition in the case of 80M) from the tx freq.

Here is an example, suppose it takes 1 click to set the freq calibration (that is 10Hz at 50MHz). If you set the rig to 15MHz you have just gone from an error of 10Hz at 50MHz to 3Hz at 15MHz or a 10/3 (3.333) divide factor. [xHz/15MHz = 10Hz/50MHz, solve for xHz]The rx freq is then a simple +/- from that so the error is constant at 3Hz, in this example.

Hope this makes sense.

[sri the links I posted earlier aren't coming thru properly, hope everyone can cut and paste appropriately]

-mike/w1mt

--- Dave <dmertz@...> wrote:

I
> don't think
> 50/15 applies. But then I still have a mystery (to
> me).
>

Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

149. Re: [AT_Sprint] Re: ATS-3A calibration

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-13 09:39:00 UTC
From: Michael Harnage
Topic: 143 Message: 149

Well, let's see right ratio wrong application, dooh.

Dog wakes us up at 4am this morning and I can't get back to sleep and my mind wondering and I end up rethinking the clicks/calibration issue.

In the example I gave, it should have jumped right out at me but it didn't. If you divide your offset at 15MHz by 3 you do indeed get the number of clicks that it will take to correct during CF. Reason is that for every 10Hz change (click) one makes at 50MHz there is a 3Hz change at 15MHz. My analysis should have had us multiply the offset at 15MHz by 3.3333 (instead of divide) and then divide by 10(Hz/click). Which is the same as divide by 3. Dave's empirical observation was right on!

This stuff really keeps me on my toes.

So, here are the question of the day:

If there is a 70Hz offset at 10MHz how many clicks will it take to correct during CF, in an ATS3A? [Hint: Divide by 3 won't work, it is 10MHz where we are measuring]

Extra credit, if it was an ATS3, how many clicks?

-mike/w1mt

> --- Michael Harnage <w1mt@...> wrote:

> It does apply. Remember that only the tx freq is
> calculated with the CF constant. The rx freq is
> calculated with a simple subtraction (or addition in
> the case of 80M) from the tx freq.
>
> Here is an example, suppose it takes 1 click to set
> the freq calibration (that is 10Hz at 50MHz). If you
> set the rig to 15MHz you have just gone from an
> error
> of 10Hz at 50MHz to 3Hz at 15MHz or a 10/3 (3.333)
> divide factor. [xHz/15MHz = 10Hz/50MHz, solve for
> xHz
>]The rx freq is then a simple +/- from that so the
> error is constant at 3Hz, in this example.
>

> Hope this makes sense.
>
> [sri the links I posted earlier aren't coming thru
> properly, hope everyone can cut and paste
> appropriately]
>
> -mike/w1mt
>
> --- Dave <dmertz@...> wrote:
>
> I
> > don't think
> > 50/15 applies. But then I still have a mystery
> (to
> > me).
> >

_____
Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

150. Re: [AT_Sprint] Re: Still no luck

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-13 14:46:18 UTC
From: Gil Stacy
Topic: 134 Message: 150
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

151. Re: ATS-3A calibration

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-13 15:45:20 UTC
From: mertzdave
Topic: 143 Message: 151

--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:
> every 10Hz change (click) one makes at 50MHz there is
> a 3Hz change at 15MHz. My analysis should have had us
> multiply the offset at 15MHz by 3.3333 (instead of
> divide) and then divide by 10(Hz/click). Which is the
> same as divide by 3.

Yeah, I finally worked this out myself just before reading your two latest posts.

My problem was that I wasn't paying attention to the way the frequency register value was actually calculated. I was thinking in terms of calculating it from the LO frequency instead of the Rx frequency and then subtracting the IF offset.

> If there is a 70Hz offset at 10MHz how many clicks
> will it take to correct during CF, in an ATS3A? [Hint:
> Divide by 3 won't work, it is 10MHz where we are
> measuring]

If either procedure is done by comparing to the 10 MHz WWV signal, the number of button presses would be the offset divided by 2, so 35 clicks.

> Extra credit, if it was an ATS3, how many clicks?

The ATS-3 also changes 10 Hz per click but at 40 MHz.

70 * 40 / 10 / 10 = 28 clicks.

Actually, I was quite impressed that my 50 MHz oscillator was only off by 150 Hz (3 ppm).

Dave

152. Re: Still no luck

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-13 16:20:43 UTC
From: Dave
Topic: 134 Message: 152

The receiver can be checked without a band filter module by just plugging a wire into the Rx-In (J1-1 as indicated on the Tx page of the schematic, not the incorrectly indicated J1-4 on the Rx page). The receiver defaults to 20 meters in the absence of a filter module and you can DFE to WWV on 15 MHz by entering 9999 and stepping up from there.

Roland, I'm not sure if you said or not: Do you get 10 MHz on TP1 (or better yet, on DDS pin 19, accessable at the end of C35 just above TP1) when in CF calibration? This requires nothing working but the processor (we know it is), 3.3V (we know it is), 5V (we know it is), the 50 MHz oscillator (we don't know), the DDS chip (we don't know) and the DDS output not shorted. Of course, this is almost all of the same stuff needed for transmit (add the PA circuit), so I really think your problem is in the area of the DDS chip. It's also the finest-pitch part, so most likely to have a soldering error.

However, a problem with no 10 MHz could also be with caused by no signal from the oscillator. See if you have 50 MHz coming out of it on pin 5 (the pin next to "OSC").

Dave, WA3OFF

153. Re: [AT_Sprint] Re: ATS-3A calibration

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-13 17:14:26 UTC
From: Michael Harnage
Topic: 143 Message: 153

Dave is correct with a two correct answers. :)

I have worked this out numerous times, just can never remember it when I need it. Now at least, it is captured in this group and I know where to go to "remember" next time.

Yes, this batch of 50MHz oscillators seems to be quite well calibrated. Mine was very close too, abt 20Hz off at 10MHz. I have seen some of the 40MHz oscillators be as much as 100Hz off at 10MHz. (Still quite good as that is 10ppm and the parts were spec'd at 20ppm, if I remember correctly).

-mike/w1mt

--- mertzdave <dmertz@...> wrote:

> --- In AT_Sprint@yahoogroups.com, Michael Harnage
> <w1mt@...> wrote:
> > every 10Hz change (click) one makes at 50MHz there
> is
> > a 3Hz change at 15MHz. My analysis should have had
> us
> > multiply the offset at 15MHz by 3.3333 (instead of
> > divide) and then divide by 10(Hz/click). Which is
> the
> > same as divide by 3.
>
> Yeah, I finally worked this out myself just before
> reading your
> two latest posts.
>
> My problem was that I wasn't paying attention to the
> way the
> frequency register value was actually calculated. I
> was thinking
> in terms of calculating it from the LO frequency
> instead of the
> Rx frequency and then subtracting the IF offset.
>
> > If there is a 70Hz offset at 10MHz how many clicks
> > will it take to correct during CF, in an ATS3A?
> [Hint:
> > Divide by 3 won't work, it is 10MHz where we are
> > measuring]

>
> If either procedure is done by comparing to the 10
> MHz WWV signal,
> the number of button presses would be the offset
> divided by 2, so
> 35 clicks.
>
> > Extra credit, if it was an ATS3, how many clicks?
>
> The ATS-3 also changes 10 Hz per click but at 40
> MHz.
>
> 70 * 40 / 10 / 10 = 28 clicks.
>
> Actually, I was quite impressed that my 50 MHz
> oscillator was only
> off by 150 Hz (3 ppm).
>

Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

154. New file uploaded to AT_Sprint

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-13 20:30:55 UTC
From: AT_Sprint@yahoogroups.com
Topic: 154 Message: 154

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the AT_Sprint
group.

File : /ATS3A.jpg
Uploaded by : n1rx <bruce.beford@...>
Description : ATS-3A Hi-Resolution Pic, With 20M band module

You can access this file at the URL:
http://groups.yahoo.com/group/AT_Sprint/files/ATS3A.jpg

To learn more about file sharing for your group, please visit:
http://help.yahoo.com/help/us/groups/files

Regards,

n1rx <bruce.beford@...>

155. Another ATS-3A lives! (longish)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-13 20:50:13 UTC
From: Bruce Beford
Topic: 155 Message: 155

Hi Gang.

I finally found some time this week to put my ATS-3A together. I built the original ATS-3 when they first came out, so I knew what to expect.

The building of the main board went fine. No problems found. Total time was about 5 hours. For those waiting to start, I will just say read the directions. Steve often puts hints in the text on what to watch for at various points.

One difference from the original ATS-3 is the mounting of the toriod choke for the final transistors. In the original ATS-3, it was mounted 'laying down' on the bottom, or button side of the board. In the '3A, it is mounted vertically, on the same side of the board as most of the components.

In the 3a, Steve has also instructed the builder to mount the output transistors laying flat against the board. This allows the board to act as a heat sink, and help dissipate the heat from the transistors. Steve used this same trick in his Universal QRP Transmitters he also sells. In order to get the transistors to lay flat against the board, it is VERY important to follow the instructions on page 17 concerning the mounting of D3. This is a glass, thru-hole zener that is mounted on the back of the board. Steve cautions the builder to be sure to cut the leads for this diode "as flush to the top side as possible". I would suggest fitting the diode into it's holes, then removing the diode and trimming the leads before soldering. This way, you can get the lead length down so they go into the holes, but don't extend out the top side of the board.

One other place you need to be mindful of is the mounting of the mounting of U12 of the 'back' of the board. This part must be mounted such that it is rotated from it's expected position. A well-placed and illustrated note on page 16 of the manual show this quite well.

So far, I have only completed one band module, for 20M. The radio checks out fine, and has good sensitivity on this band. I will be proceeding to the other modules next.

I have posted a high-res picture in the Files area of the top of the main board, and the 20M module, for those who may find it a useful reference.

72/73,
Bruce N1RX

156. Re: Another ATS-3A lives! (longish)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-13 22:33:41 UTC
From: Dave
Topic: 155 Message: 156

--- In AT_Sprint@yahoogroups.com, "Bruce Beford" <bruce.beford@...>
wrote:
> One difference from the original ATS-3 is the mounting of the
> toriod choke for the final transistors. In the original ATS-3, it
> was mounted 'laying down' on the bottom, or button side of the
> board. In the '3A, it is mounted vertically, on the same side of
> the board as most of the components.

The -3A instructions do seem indicate that L3 is a top-side
component, but it fits just fine on the bottom as in the -3, so
that's where I put it. It seems better protected on the bottom. I
used a bit of Kapton tape as extra insulation between the coil and
the tin and between the coil and the board. (Kapton tape... really
good stuff, but expensive, close to $0.03 an inch for the 3/4"-wide
stuff.)

Looking closely at the pictures of the board in the manual, it seems
L3 might have been installed on top of the board for the bottom-side
picture but removed entirely for the top-side picture.

Dave

157. L3 mounting for ATS-3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-13 23:20:49 UTC
From: Bruce Beford
Topic: 155 Message: 157

--- In AT_Sprint@yahoogroups.com, "Dave" <dmertz@...> wrote:

> Looking closely at the pictures of the board in the manual, it seems
> L3 might have been installed on top of the board for the bottom-side
> picture but removed entirely for the top-side picture.
>
> Dave
>

Steve mentions in the captions of the pictures that they were taken with the thru hole components not mounted (or in the case of L3, I suspect, it was removed). This was due to the fact that he just plopped the board down on his scanner for the pics. The thru-hole components would have raised the board too far off the scanner for a clear picture.

L3 should work perfectly fine either above or below the board. Builder's preference for this part, I think. The kapton tape (or similar insulator) is a good idea if mounting it below.

-Bruce.

158. Elmer 101 program for ATS3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-14 00:32:54 UTC
From: nn4cw
Topic: 158 Message: 158

It seems that the ATS3 would lend itself to an "Elmer 101" type program that was done with Dave Benson's SW+ series of monobanders. http://www.qsl.net/kf4trd/faq.html The project combined building in stages with discussion of the electronics.
I'd like to try building an ATS3a in stages, testing as I went. I've successfully built three ATS's, but I think the "Elmer 101" type build in stages would go a long way in educating me fully as to what was going on electronically. It would also help those who after the last solder joint, don't hear a peep. I don't think I could have built my K2 any other way but in stages, tesing as I went, but it didn't help me fully understand what was going on.

Gil NN4CW

159. Re: Elmer 101 program for ATS3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-14 02:53:00 UTC
From: mertzdave
Topic: 158 Message: 159

I think the building blocks would be power supply, processor and audio, DDS, the remainder of the receiver (mixers, IF fliter and AGC), the remainder of the transmitter, and the filter modules, in pretty much that order (maybe one filter module before finishing the tx). Each subsequent block depends on most or all of the preceding ones.

The practical consideration I see against this is that getting the processor running requires mounting bulky (relatively speaking) parts on the bottom of the board, making assembly of the subsequent blocks more difficult unless a fixture is used to support the board (perhaps the mounting hardware that comes with the kit can be used as legs).

Certainly I've used this project to get a much better understanding of receiver operation, but mainly by understanding how and why the code for the processor controls everything the way it does (I'm mainly a digital-hardware guy).

Dave, WA3OFF

160. Re: [AT_Sprint] Re: Elmer 101 program for ATS3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-14 12:06:54 UTC
From: Michael Harnage
Topic: 158 Message: 160

First thing I do when starting one of these kits is to
put the bolts, spacer and nut on the board exactly as
suggested below, so that I can work on either side.
This way you don't lose the mounting hardware during
the process. :)

-mike/w1mt

--- mertzdave <dmertz@...> wrote:

> (perhaps the mounting hardware that comes with the
> kit can be used
> as legs).
>

_____
Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

161. Re: [AT_Sprint] Re: Elmer 101 program for ATS3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-14 11:25:21 UTC
From: Gil Stacy
Topic: 158 Message: 161
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

162. Re: [AT_Sprint] Re: Elmer 101 program for ATS3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-14 13:47:46 UTC
From: Gil Stacy
Topic: 158 Message: 162
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

163. Re: [AT_Sprint] Re: Elmer 101 program for ATS3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-14 14:37:15 UTC
From: Jeffrey Embry
Topic: 158 Message: 163
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

164. Re: [AT_Sprint] Re: Elmer 101 program for ATS3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-14 14:51:55 UTC
From: jaevans@pcisys.net
Topic: 158 Message: 164

I always thought they couldn't take the pressure ;)

72 - john - n0hj

> They don't get lost...they know exactly where they are...;-). I think they
> just can't take the heat.
>
> --
> Jeff Embry, K3OQ

This message was sent using Endymion MailMan.
http://www.endymion.com/products/mailman/

165. ATS-3A assembling by BGA infra-red placer ERSA

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-14 16:44:46 UTC
From: Petr Ourednik
Topic: 165 Message: 165

Hi folks,

are You interested in the assembling the ATS-3A by professional system like BGA infra-red ERSA P550A system?

If yes then check the Photos/ATS-3A by OK1RP where I placed some pictures from first part of assembling with this system.

You can see over there step by step the assembling procedure from blank PCB to fully assembled ATS-3A inspected by infra camera > maybe ready to install by NASA to space-shuttle ? :)

BTW: The components assembling before the heating by infra pics missing now > will be added asap.

Depending to my high quality assembling technology we will see if it will work like a champ ;)

Best regards,

Petr, OK1RP

166. Re: Elmer 101 program for ATS3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-14 16:40:39 UTC
From: Kurt
Topic: 158 Message: 166

Please don't take this as critism...it really is not. But I have never understood the necessity of these Rube Goldberg machines for working with SMT parts. (Unless you have majorly shakey hands...then I could see it.) I also hear many stories about the danger of using fine tipped tweezers.

I think the problem is that people get cheap tweezers that don't offer good control of the part.

I have a fine tip tweezer (an ESD one) that cost about $20. Expensive, yes, but I have never ever had a part spit out of it.

As far as holding the part down. Tin one pad, then heat it and place the part on it first...it is truly held after that on its own...no contraption required.

After getting over the fear factor of working with something different, I now prefer working with SMT parts. They are much quicker to work with...and I think they make nicer looking boards...like a little sci-fi city scapes.

Regards,

Kurt - ae6uj

--- In AT_Sprint@yahoogroups.com, "Gil Stacy" <gilstacy@...> wrote:
>
> Dave,
> Good insights.
> I've worked on the top of the board after installing the bottom. I cut a
> small .25" thick disk out of a wine cork, cut it into fourths and stuck .5"
> pieces of toothpicks into the cork centers. I placed the board on top of
> the pieces at each corner and the toothpicks held them in place while I
> soldered using my doofus.
> Gil NN4CW
>

167. Re: ATS-3A assembling by BGA infra-red placer ERSA

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-14 17:46:42 UTC
From: Kurt
Topic: 165 Message: 167

Now that is an expensive tweezer!

Cool.

Kurt - ae6uj

--- In AT_Sprint@yahoogroups.com, "Petr Ourednik" <indians@...> wrote:
>
> Hi folks,
>
> are You interested in the assembling the ATS-3A by professional
> system like BGA infra-red ERSA P550A system?
>
> If yes then check the Photos/ATS-3A by OK1RP where I placed some
> pictures from first part of assembling with this system.
>
> You can see over there step by step the assembling procedure from
> blank PCB to fully assembled ATS-3A inspected by infra camera >
maybe
> ready to install by NASA to space-shuttle ? :)
>
> BTW: The components assembling before the heating by infra pics
> missing now > will be added asap.
>
> Depending to my high quality assembling technology we will see if
it
> will work like a champ ;)
>
> Best regards,
>
> Petr, OK1RP
>

168. Re: [AT_Sprint] Re: Elmer 101 program for ATS3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-14 17:56:10 UTC
From: Gil Stacy
Topic: 158 Message: 168
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

169. Re: Still no luck

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-14 17:41:52 UTC
From: Roland Whitsitt
Topic: 134 Message: 169

Dave (and others), I get exactly 10Mhz from C35 and 50.000Mhz from pin 5 in CF mode.
Kinda think I may have a short somewhere though. I soldered a needle to either end of a wire and carefully held it against each leg of the DDS and where the trace went to just to make sure each path was going where it was suppose to. I also did this with the MCU and a several other places. No difference. What I'm hearing at R1 sounds like broadcast type stuff. On Pin1 band module hole with the antenna/cap probe mentioned elsewhere, I get more frequency related signals but they are weak and I have to press hard with the pin. I get the same from some nearby cap but nowhere else. I'm wondering if I should attempt removing the DDS. That idea scares the heck out of me. But I'm running out of ideas.
hmmmmmm

Thanks everybody for the help thus far!
Roland N5VWN
--- In AT_Sprint@yahoogroups.com, "Dave" <dmertz@...> wrote:
>
> The receiver can be checked without a band filter module by just
> plugging a wire into the Rx-In (J1-1 as indicated on the Tx page
> of the schematic, not the incorrectly indicated J1-4 on the Rx page).
> The receiver defaults to 20 meters in the absence of a filter module
> and you can DFE to WWV on 15 MHz by entering 9999 and stepping up
> from there.
>
> Roland, I'm not sure if you said or not: Do you get 10 MHz on TP1
> (or better yet, on DDS pin 19, accessable at the end of C35 just
> above TP1) when in CF calibration? This requires nothing working
> but the processor (we know it is), 3.3V (we know it is), 5V (we know
> it is), the 50 MHz oscillator (we don't know), the DDS chip (we
> don't know) and the DDS output not shorted. Of course, this is
> almost all of the same stuff needed for transmit (add the PA
> circuit), so I really think your problem is in the area of the DDS
> chip. It's also the finest-pitch part, so most likely to have a
> soldering error.
>
> However, a problem with no 10 MHz could also be with caused by no
> signal from the oscillator. See if you have 50 MHz coming out of it
> on pin 5 (the pin next to "OSC").
>
> Dave, WA3OFF
>

170. Re: [AT_Sprint] ATS-3A assembling by BGA infra-red placer ERSA

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-14 17:58:42 UTC
From: John A. Evans - N0HJ
Topic: 165 Message: 170

Petr, what happened to the board?? it looks like it got scorched during the process.

72 - john - n0hj

171. Re: [AT_Sprint] Re: Still no luck

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-14 19:00:26 UTC
From: Gil Stacy
Topic: 134 Message: 171
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

172. Re: Still no luck

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-14 19:41:16 UTC
From: mertzdave
Topic: 134 Message: 172

> I get exactly 10Mhz from C35 and 50.000Mhz from pin
> 5 in CF mode.

That's a good sign that the DDS is functioning okay. Check for
10 MHz at TP1. If it's not there, you'll want to trace it through
the filter that produces "DDS LO" (C35 to C37). DDS LO is then fed
back into the DDS chip on pin 17 where the DDS chip squares it up
and spits it back out on pin 16 to feed the TX at TP1.

If 10 MHz is present at TP1, move on to the "CO" LO offset
calibration. This requires that DDS LO is passed through the first
mixer, the crystal filter, the second mixer, the first audio amp,
the AGC chip, then the audio output amp (this is known to work).

If you get a good tone during the CO check, that leaves stuff between
the filter module and the first mixer as the problem area.

> I'm wondering if I should attempt removing the DDS.

No, I think it fine unless it's shorted at pin 16 or 17, killing
the 10 MHz signal at DDS LO or TP1.

Dave, WA3OFF

173. Re: [AT_Sprint] Re: Elmer 101 program for ATS3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-14 18:10:35 UTC
From: Jeffrey Embry
Topic: 158 Message: 173

I don't know. I say whatever works for you use it. WA3OFF gave me a good tutorial on SMT...and I modified it to where I felt more comfortable...basically I went from straight tweezers to ones with a bend at the end. But I am all for using whatever works for the person that is doing the work.

73

--
Jeff Embry, K3OQ
FM19je
ARCI #11643
FPQRP #-696
NAQCC #25
AMSAT LM-2263

No trees were harmed in the sending of this message, however a large number of electrons were terribly inconvenienced.

On 7/14/06, Kurt <ae6uj@...> wrote:
> Please don't take this as critism...it really is not. But I have never
> understood the necessity of these Rube Goldberg machines for working
> with SMT parts. (Unless you have majorly shakey hands...then I could
> see it.) I also hear many stories about the danger of using fine tipped
> tweezers.
>
> I think the problem is that people get cheap tweezers that don't offer
> good control of the part.
>
> I have a fine tip tweezer (an ESD one) that cost about $20. Expensive,
> yes, but I have never ever had a part spit out of it.
>
> As far as holding the part down. Tin one pad, then heat it and place
> the part on it first...it is truly held after that on its own...no
> contraption required.
>
> After getting over the fear factor of working with something different,
> I now prefer working with SMT parts. They are much quicker to work
> with...and I think they make nicer looking boards...like a little sci-
> fi city scapes.
>
> Regards,
>
> Kurt - ae6uj
>
>

> --- In AT_Sprint@yahoogroups.com, "Gil Stacy" <gilstacy@...> wrote:
> >
> > Dave,
> > Good insights.
> > I've worked on the top of the board after installing the bottom. I
> cut a
> > small .25" thick disk out of a wine cork, cut it into fourths and
> stuck .5"
> > pieces of toothpicks into the cork centers. I placed the board on
> top of
> > the pieces at each corner and the toothpicks held them in place while
> I
> > soldered using my doofus.
> > Gil NN4CW
> >
>
>
>
>
>
>
>
> Yahoo! Groups Links
>
>
>
>
>
>
>

174. Re: ATS-3A assembling by BGA infra-red placer ERSA

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-15 13:08:00 UTC
From: nn4cw
Topic: 165 Message: 174

Petr,
Very interesting. I've seen a few hobbyists using "toaster ovens" for
smd's, but nothing like the professional equipment you have access to.

73, Gil NN4CW

175. ATS3, my way

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-16 07:30:34 UTC
From: Harald, OE6GC
Topic: 175 Message: 175

After finishing my ATS3, I got a lot of informations to modify something on this excellent equipment. Specially the redesign of the RF Filters for the european situation by Lutz, DL2HRP, seems worthwile to do.

I described my way of doing some mods on my homepage at

http://www.qth.at/oe6gc/Projects/ATS-3__AT_sprint_III/ats-3__at_sprint_iii.html

and you will see some Photos in the Album OE6GC.
72, Harry, OE6GC

176. Re: ATS3, my way

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-16 11:48:27 UTC
From: Bruce Beford
Topic: 175 Message: 176

Bravo, Harry! Thank you for sharing your project with the group. It looks very nice. I have been thinking of doing this for a long time. (ATS-3, ATU, and power in one case). You have inspired me to think about this some more.

Has anyone else done something like this yet? Please post your experience and results to the group.
72,
Bruce N1RX

177. Re: [AT_Sprint] ATS3, my way

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-16 14:34:42 UTC
From: John A. Evans - N0HJ
Topic: 175 Message: 177

Hi Harry,

Terrific job on the packaging of your ATS-3. I am working on a similar, but larger package and should have photos soon. I am curious about your antenna matching network - can you describe it and provide a schematic?? What kind of antenna do you use with the ATS-3 in the field?? Do you get all band coverage with it??

tnx es 72 - john - n0hj

178. Re: [AT_Sprint] ATS3, my way

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-16 15:33:14 UTC
From: Karl Larsen
Topic: 175 Message: 178

John A. Evans - N0HJ wrote:
> Hi Harry,
>
> Terrific job on the packaging of your ATS-3. I am working on a
> similar, but larger package and should have photos soon. I am curious
> about your antenna matching network - can you describe it and provide a
> schematic?? What kind of antenna do you use with the ATS-3 in the
> field?? Do you get all band coverage with it??
>
> tnx es 72 - john - n0hj
>
> Hi Harry and John, I have had my ats-3 a long time, and it's in an altoids tin with the special computer software. For QRP outdoors I have an Elecraft T1 auto tuner that I recommend to you all. This tuner is just perfect for the ats-3 power. There is one problem I will talk to. The T1 while tuning presents a "bad impedance" to the ats-3 final amps and they draw a lot of current and the radio resets. The simple way to correct this is to use a 9 volt battery and this works fine. Another fix is a 10 ohm resistor in the antenna line you remove after tuning. The T1 holds the tuning once your happy.
>
The antenna I use is a 88 foot radiator end fed to the T1. Then two
counterpoise wires 30 and 35 feet long are connected to the ground of
the T1. I can load this wire on everything from 160 to 6 meters :-)

It really works good on 80, 40, 30 and 20 meters.

73 Karl K5DI

>
>
>

179. ATS-3A 40/30 Rx input filter mod

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-16 16:51:08 UTC
From: Steven Weber
Topic: 179 Message: 179

Hello everyone.

I hooked up my -3A rig the the ALT tuner and 40M end feed wire recently and was dismayed to hear SWBC heterodynes. The new front end was suppost to eliminate that problem. So much for theory!

Anyway, if you have this problem (it sort of depends on the type of antenna, tuner and your location in the world) there is a simple solution.

Remove the 2.2 pfd coupling cap between the Rx input coils. There is enough stray coupling that removing the cap only degrades the sensitivity a little, from about 0.2 uv to 0.5 uv, and seems to be enough to get rid of the heterodynes, at least here in NH. If this isn't enough to completely eliminate the problem, try changing the link coupling to the first coil from 5 turns to 1 turn. You will, of course, have to re-peak the coils and the tuning is now quite sharp.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

180. New to Group

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-16 19:25:55 UTC
From: Terry WA0ITP
Topic: 180 Message: 180

I just joined the group yesterday, and wish I had found it earlier. I've been recovering from a computer crash and lost some emails in the process, so I missed the announcement..

I've built several of Steve's designs in cluding the ATS2 and the 3. (and awaiting his next rig) I still have the 3, and use it for all my portable ops, from camping to Polar Bear outings, to stringing a wire out a top floor window in a motel.. Lotsa fun no matter how you use it.

I've been offering free custom Altoids labels and some mounting hints to anyone who is interested. They're all over the US, Canada, and Sweden..Just a way to give something back to the hobby and support a great little rig. Check 'em out here and let me know if you're interested.

http://www.wa0dx.org/wa0itp/ats3.html
http://www.4sqrp.com/ (link's abt halfway down the page)

Glad to be part of the group..

72 73
Terry, WA0ITP
www.wa0dx.org/wa0itp

181. Original AT Sprint configuration in a pencil box

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-16 20:59:41 UTC
From: John A. Evans - N0HJ
Topic: 180 Message: 181

For those interested in a little ancient history, here is an article and some pix of my original ATS setup for backpacking. I am working on a much smaller configuration right now that will fit in the Batman tins pictured in the photo section of this group.

http://www.arsqrp.com/ars/pages/back_issues/2004_text/0304_text/N0HJ.html

72 - john - n0hj

182. Re: ATS3, my way

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-17 05:52:41 UTC
From: Harald, OE6GC
Topic: 175 Message: 182

Hi Karl and all user of the wounderful ATS3!

I am using the LED-SWR Indicator similar to that described from Steven, it puts a resistive bridge during the tuningtime of the ATU behind the PA and so the PA sees a value "near" 50 ohm.

The ATU cuircuit I am using is described on my homepage too. L/C switching is done by the dip switches. The ATU is fine with halfwave endfeed antennas.

72, Harry, OE6GC

183. Re: [AT_Sprint] Re: ATS3, my way

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-17 11:23:13 UTC
From: Karl Larsen
Topic: 175 Message: 183

Harald, OE6GC wrote:
> Hi Karl and all user of the wounderful ATS3!
>
> I am using the LED-SWR Indicator similar to that described from Steven,
> it puts a resistive bridge during the tuningtime of the ATU behind the
> PA and so the PA sees a value "near" 50 ohm.
>
Yes and that is perfect for the ats-3.
> The ATU cuircuit I am using is described on my homepage too. L/C
> switching is done by the dip switches. The ATU is fine with halfwave
> endfeed antennas.
>
>
The Electrocraft T1 is a automatic tuner so the SWR bridge is in the
tuner and the design does present low impedance to the radio while
tuning. I tune up sending dashes from the ats-3 and it takes around 10
seconds to reach a match.

My antenna is not always 1/2 wavelength. So I must match a wider range.

73 Karl K5DI
> 72, Harry, OE6GC
>
>
>
>
>
>
>
>
> Yahoo! Groups Links
>
>
>
>
>
>
>
>
>
>

184. Re: ATS-3A assembling by BGA infra-red placer ERSA

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-17 13:42:42 UTC
From: Petr Ourednik
Topic: 165 Message: 184

John,

oh, yes unfortunately You are right...I scorched a bit the PCB in the U6 area cause of my unexperienced operation with infra-red tool. I am not the operator of that tool. To be sure that Your parts will be soldered properly You need to peak up to 200C in the temperature profile. Main problem is timing for each of the temp period > 30 - 70 - 120 - 170 - 200C frames must be precisiously defined.
Second also important think is to adjust the infra-red beam at the good area on the PCB. If You have narrow beam then Your outer parts will not be soldered. That was my problem for caps C50/51/52 so I decided to heat this area a bit longer...wrong idea.
Furtunately the PCB is not damaged just coloured to brown a bit and will be coverd by uP U6 :)

More pictures comes soon.

Best regards,

Petr, OK1RP

--- In AT_Sprint@yahoogroups.com, "John A. Evans - N0HJ" <jaevans@...> wrote:
>
> Petr, what happened to the board?? it looks like it got scorched during
> the process.
>
> 72 - john - n0hj
>

185. Re: ATS-3A assembling by BGA infra-red placer ERSA - all parts on board

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-17 13:53:28 UTC
From: Petr Ourednik
Topic: 165 Message: 185

Gil,

thanks for message. Yes I know that we have it in the company for long time but never used it as I am working with few SMD parts daily and its easy to soldering manualy...

When ATS-3A PCB arrived my friends had the idea to safe time and make it professionaly. I decided to try it as I have a chance to learn it and make good trainning on the BGA placer for the future.

Now I have all SMD parts mounted on the main PCB board.
Total assembling time was 3hrs including the arrangement and heating process.

I added the pictures where You can see the tools used for putting the parts on board, using the temp profile, heating the PCB incl. temp sensors watching the overheating.

Interesting pics are from inspection camera and also pics made thru microscope lens.

Enjoy it...:)

72, Petr OK1RP

--- In AT_Sprint@yahoogroups.com, "nn4cw" <gilstacy@...> wrote:
>
> Petr,
> Very interesting. I've seen a few hobbyists using "toaster ovens" for
> smd's, but nothing like the professional equipment you have access to.
>
> 73, Gil NN4CW
>

186. Re: [AT_Sprint] Re: ATS-3A assembling by BGA infra-red placer ERSA

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-17 14:11:47 UTC
From: Karl Larsen
Topic: 165 Message: 186

Petr Ourednik wrote:

John,

oh, yes unfortunately You are right...I scorched a bit the PCB in the
U6 area cause of my unexperienced operation with infra-red tool. I am
not the operator of that tool.

Hi Petr, yes you did the usual error of a first time user. I assume you have an open heater that gets the board to around 100 C. I wait 20 minutes to get a good heat all over the board. Then you use a heat gun that will make 300 C and you keep it moving around and around and you watch as the contacts all sudden show solder instead of paste and around about 3 more times and quit.

This is all from Cash Olsen who lives here and has done this many times :-)

73 Karl

To be sure that Your parts will be
soldered properly You need to peak up to 200C in the temperature
profile. Main problem is timing for each of the temp period > 30 - 70 -
120 - 170 - 200C frames must be precisiously defined.
Second also important think is to adjust the infra-red beam at the good
area on the PCB. If You have narrow beam then Your outer parts will not
be soldered. That was my problem for caps C50/51/52 so I decided to
heat this area a bit longer...wrong idea.
Furtunately the PCB is not damaged just coloured to brown a bit and
will be coverd by uP U6 :)

More pictures comes soon.

Best regards,

Petr, OK1RP

--- In AT_Sprint@yahoogroups.com, "John A. Evans - N0HJ"
wrote:

Petr, what happened to the board?? it looks like it got scorched

during

the process.

72 - john - n0hj

---------- Yahoo! Groups Sponsor ----------~-->
Yahoo! Groups gets a make over. See the new email design.
http://us.click.yahoo.com/XISQkA/lOaOAA/yQLSAA/ELTolB/TM

---~->

Yahoo! Groups Links

<*> To visit your group on the web, go to:
http://groups.yahoo.com/group/AT_Sprint/

<*> To unsubscribe from this group, send an email to:
AT_Sprint-unsubscribe@yahoogroups.com

<*> Your use of Yahoo! Groups is subject to:
http://docs.yahoo.com/info/terms/

187. ATS-3A assembled by BGA infra-red placer ERSA

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-17 14:54:17 UTC
From: Petr Ourednik
Topic: 187 Message: 187

Hi,

just few mins ago I finished the posting the pics to Photos from assembling process of the main board of ATS-3S on BGA infra-red placer ERSA step by step.

You can find all pics from blank PCB to fully assmbled on BGA placer including the pics from inspection camera and even pics thru the microscope lens.

Now is inspected asd ready for next step of building the ATS-3A baby.

Enjoy it :)

72, Petr OK1RP

188. Re: ATS3, my way

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-17 16:32:32 UTC
From: Steve/n0tu
Topic: 175 Message: 188

Harry, Very professional looking packaging!
May I ask where did you acquire the case? Do the band modules fit through the back panel lid easily?

Nice work! Steve/n0tu

189. Re: [AT_Sprint] Re: ATS3, my way

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-17 20:02:45 UTC
From: Gil Stacy
Topic: 175 Message: 189
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

190. for sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-18 23:50:57 UTC
From: ron
Topic: 190 Message: 190

One:
AT Sprint 3, enclosed in Altoids with external DC plug and battery holder.

Please make a offer.
Please reply direct, thank you.

Ron, wb1hga

191. Batman tins backpacking setup complete

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-19 00:05:41 UTC
From: n0hj
Topic: 191 Message: 191

I just posted top and bottom view photos of my backpacking rig setup. Lots of extra room inside - it will hold my Koss earphones, my KK5PY TE NE Key, pencil, and small pad of paper for logging. Total weight of this setup without end fed longwire is 16.4 oz as shown.

The large board for the tuner is overkill, but I wanted to see if I could make the setup as general as possible, in case I want to be able to swap tuners as needed. The tuner works fairly nicely on 80/40/30/20m with low SWR on 40/30/20 and 1:2.5 on 80m - maybe if I tweak the length of my end fed, it will behave better.

This setup will be christened on an upcoming Colorado Trail trip with N0TU !!!

72 - john - n0hj

193. Re: [AT_Sprint] Re: ATS3, my way

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-19 01:16:26 UTC
From: John A. Evans - N0HJ
Topic: 175 Message: 193

Greetings all,

I just posted pix of my completed (for now) Batman tin backpacking setup with ATS-3, Fuchs tuner, 8 AA lithium battery pack, with room for band modules, Koss earphones, KK5PY Te Ne Key, and pencil. I will also include a small pad of paper for logging. The total weight is 16.4 oz with all accessories protected inside. There are no switch or control protrusions to get mangled in my backpack (hey, I'm a gorilla sometimes) and the rig is pretty much grab and go.

I keep my 41m end fed wire wrapped around a titanium clipboard that also doubles as frame support for my backpack.

The Fuchs tuner worked pretty well today on a 41m (134.5 foot) wire I thru in the trees in my yard in an inverted V configuration, fed at one end. I can get low SWR on 40/30/20m (typically 1:1.6 or less) and can still get 1:2.5 on 80m. I suspect if I shorten my wire a bit it may get closer to 1:1 for 80m. There are hardly any parts in this tuner, compared to my ZM-2 which weighs a ton (relatively). I used header pins for the two rotary switches in the Fuchs design which make for a smaller and lighter design. I had thought about DIP switches, but I was not comfortable with durability after repeated usage. Of course, the little header jumpers can get lost, so I am working on a fix for that possibility.

72 - john - n0hj

194. Keyer memory usage

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-20 15:53:25 UTC
From: w1mt
Topic: 194 Message: 194

How many of you guys use the keyer memory? How many characters do you use?

Trying to find out if a reduction from 124 bytes to around 70 bytes would be an inconvenience to anyone. If I can drop the keyer memory total bytes to around 70 I can free up a ton of program space. Enough to add some more functionality to the firmware. Right now I have almost 600 bytes free just begging for something else to be added to the firmware.
:)

-mike/w1mt

195. Re: [AT_Sprint] Keyer memory usage

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-20 16:10:41 UTC
From: Jeffrey Embry
Topic: 194 Message: 195

Mike and all,

Once I get the thing together I plan on using the memory keyer primarily for sprints to call CQ and possibly my exchange in the 2nd memorey space. I could do with one memory for CQ only, if that would help. So ti wold be CQ SP K3OQ TEST....so it looks like 15 characters including spaces...and if the exchange is in there it would mbe 559 MD 3W...or 9 characters including spaces. I will also be changing the SP to FP for the monthly Flying Pigs Run For the Bacon.

Status of my ATS3a. All that is left on the main board is L3 and then the filters. Gawd I hate winding toroids...so I am procrastinating. But it will be ready for the next Spartan Sprint.

Let me know if this is of any use.

72,

Jeff - K3OQ-

On 7/20/06, w1mt <w1mt@...> wrote:
> How many of you guys use the keyer memory? How many characters do you
> use?
>
> Trying to find out if a reduction from 124 bytes to around 70 bytes
> would be an inconvenience to anyone. If I can drop the keyer memory
> total bytes to around 70 I can free up a ton of program space. Enough
> to add some more functionality to the firmware. Right now I have
> almost 600 bytes free just begging for something else to be added to
> the firmware.
> :)
>
> -mike/w1mt
>
>
>
>
>
>
>
> Yahoo! Groups Links
>
>
>
>
>

>
>
>

--
Jeff Embry, K3OQ
FM19je
ARCI #11643
FPQRP #-696
NAQCC #25
AMSAT LM-2263

No trees were harmed in the sending of this message, however a large
number of electrons were terribly inconvenienced.

196. Re: Keyer memory usage

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-20 16:45:06 UTC
From: Dave
Topic: 194 Message: 196

--- In AT_Sprint@yahoogroups.com, "Jeffrey Embry" <jeffrey.embry@...>
wrote:
> it would be CQ SP K3OQ TEST....so it looks like 15 characters
> including spaces...and if the exchange is in there it would be 559 MD
> 3W...or 9 characters including spaces.

Mike, it sounds like you've been busy.

I would add a 2 characters to the CQ for my longer call. I would also use the third memory for just my 6-character call. For contests other than the Spartan Sprint, I would probably do keying from my PC instead.

(... and I am now using Mike's code, slightly modified for my non-standard paddle wiring.)

If you want a suggestion for filling up that available memory, I've been looking at doing RTTY. One paddle input would be used for PTT and the other would be for TXD. PTT would key the transmitter and TXD would control the frequency-register selection to switch between two frequencies separated by 170 Hz (no hardware mods needed to the ATS-3A).

It might also be possible to do BPSK using the DDS's phase registers.

Dave

197. Re: [AT_Sprint] Re: Keyer memory usage

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-20 17:06:59 UTC
From: Jeffrey Embry
Topic: 194 Message: 197

Sounds like a winner... I wonder if psk31 could be used on this?

- Jeff -

On 7/20/06, Dave <dmertz@...> wrote:
> --- In AT_Sprint@yahoogroups.com, "Jeffrey Embry" <jeffrey.embry@...>
> wrote:
> > it would be CQ SP K3OQ TEST....so it looks like 15 characters
> > including spaces...and if the exchange is in there it would be 559 MD
> > 3W...or 9 characters including spaces.
>
> Mike, it sounds like you've been busy.
>
> I would add a 2 characters to the CQ for my longer call. I would also
> use the third memory for just my 6-character call. For contests other
> than the Spartan Sprint, I would probably do keying from my PC instead.
>
> (... and I am now using Mike's code, slightly modified for my non-
> standard paddle wiring.)
>
> If you want a suggestion for filling up that available memory, I've
> been looking at doing RTTY. One paddle input would be used for PTT
> and the other would be for TXD. PTT would key the transmitter and TXD
> would control the frequency-register selection to switch between two
> frequencies separated by 170 Hz (no hardware mods needed to the
> ATS-3A).
>
> It might also be possible to do BPSK using the DDS's phase registers.
>
> Dave
>
>
>
>
>
>
>
>
> Yahoo! Groups Links
>
>
>
>
>
>

>
>

--
Jeff Embry, K3OQ
FM19je
ARCI #11643
FPQRP #-696
NAQCC #25
AMSAT LM-2263

No trees were harmed in the sending of this message, however a large
number of electrons were terribly inconvenienced.

198. Re: [AT_Sprint] Re: Keyer memory usage

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-20 17:30:16 UTC
From: DOUG PHILLIPS
Topic: 194 Message: 198

Jeff,

I don't thing the finals are linear enough to tx PSK, I think you need class
A or AB finals.

73

Doug W7RDP

>
>Sounds like a winner... I wonder if psk31 could be used on this?
>
>- Jeff -
>
> > If you want a suggestion for filling up that available memory, I've
> > been looking at doing RTTY. One paddle input would be used for PTT
> > and the other would be for TXD. PTT would key the transmitter and TXD
> > would control the frequency-register selection to switch between two
> > frequencies separated by 170 Hz (no hardware mods needed to the
> > ATS-3A).
> >
> > It might also be possible to do BPSK using the DDS's phase registers.
> >
> > Dave
> >
> >
> >
> >
> >
> >
> >
> >
> > Yahoo! Groups Links
> >
> >
> >
> >
> >
> >
> >
> >
> >
>
>
>--
>Jeff Embry, K3OQ
>FM19je

>ARCI #11643
>FPQRP #-696
>NAQCC #25
>AMSAT LM-2263
>
>No trees were harmed in the sending of this message, however a large
>number of electrons were terribly inconvenienced.

199. 1st Contact

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-23 23:36:53 UTC
From: Roland Whitsitt
Topic: 199 Message: 199

I finally got 'er going last night and at about 3 am I answered a CQ from a VE7ALQ. I was on 40 meters. About a 1000 miles. He was in Vancouver, B.C. We chatted for 15 minutes and he QSB'ed. I am very excited about this rig and can hardly wait to start my swing shift and do my clandestine ops. (playing while I'm on the job). Although it's been 114 degrees the past two days so I may just stay next to the computers indoors as much as possible. But there's always graveyard shift in a week. hi hi

I wish I had done a better job during construction but oh well. The next rig for sure. I had some soldering issues. Lot's of cold solder joints. The reference oscilator was not soldered well other spots. Thanks Steve for the rescue! And to all the other members here too for all the advice.

Now I can plan some camping trips and really have some fun! So, what are you guys doing out there with your rigs? I'm sure we'd all like to hear about it.

de n5vwn

200. Re: [AT_Sprint] 1st Contact

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-24 00:26:50 UTC
From: Michael Harnage
Topic: 199 Message: 200

Excellent! I was wondering how the troubleshooting was
going. Great job.

I currently have 2 ATS rigs in the stable. A modified
-3 in ultra skinny mode for Spartan Sprints. This one
runs at a lower sidetone lightened to the max (or
close to it). I just repackaged it into a lighter
container, changed the ear budd and shortened the
power pigtail. Under 2 ounces for 3 bands. Btw, my
bareboard+ear bud+battery+1 filter board weight is
0.100 pounds or 1.6 ounces. That's gotta be the the
limit for weight with this rig.

My other ATS is a 3A that is currently living in a
painted Altoids box (olive primer). Have a Hammond box
that is big enough for an Elecraft T1 and the -3A --
still thinking about how to hold the boards internally
and whether I want to cobble together a 4 band filter
board that will take commands from the main board to
control which filter is switched in. Also, not sure I
am ready to cannablize my T1 for this
project.....might have to get another T1.

-mike/w1mt

--- Roland Whitsitt <n5vwn@...> wrote:

> I finally got 'er going last night and at about 3 am
> I answered a CQ
> from a VE7ALQ.

> So, what
> are you guys doing out there with your rigs? I'm
> sure we'd all like
> to hear about it.
> de n5vwn
>

_____
Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

201. Re: 1st Contact

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-24 01:07:43 UTC
From: Roland Whitsitt
Topic: 199 Message: 201

Mike, I must confess. The help I got from Steve was "hands on" help.
He did it. It was getting to the point where my polking and probing
was scratching up the board and DDS chip that I feared for it. So I
bailed and sought professional help.
N5VWN Roland

202. Murata SFE 7.02 Filters/DL2HRP mods

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-24 12:08:57 UTC
From: nn4cw
Topic: 202 Message: 202

I intend to order several Murata SFE 7.02 filters from Germany to use in implementing DL2HRP Lutz's mods on a 40 meter board in an ATS3 (not 3a). If anyone else is interested in one or more of these filters contact me offline regarding costs.
Gil NN4CW

203. Re: [AT_Sprint] Murata SFE 7.02 Filters/DL2HRP mods

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-24 14:42:26 UTC
From: w9ya@arrl.net
Topic: 202 Message: 203

Sure thing Gil....IF they are not too expensive.

Please advise as to price, and if applicable to the ats2 *AND IF* they are not too $$ I will probably purchase TWO; as I have both an ats2 and an ats3.

Thanks OM....

Vy 72;

Bob
w9ya

> I intend to order several Murata SFE 7.02 filters from Germany to use
> in implementing DL2HRP Lutz's mods on a 40 meter board in an ATS3 (not
> 3a). If anyone else is interested in one or more of these filters
> contact me offline regarding costs.
> Gil NN4CW
>
>
>
>
>
>
>
> Yahoo! Groups Links
>
>
>
>

204. ATS-3A with BGA placer by OK1RP

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-24 18:08:40 UTC
From: Petr Ourednik
Topic: 204 Message: 204

Hi folks,

today I finished the bottom side which means that all SMD parts (both sides) and through hole parts on bottom are installed. Pics will comes soon.

Now just finishing the top side and yippee to assembling the band modules > wow gosh...lot of toroids over there ;)

72, Petr OK1RP

205. Re: 1st Contact

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-24 18:11:49 UTC
From: Petr Ourednik
Topic: 199 Message: 205

Roland,

my hut going down with congratulations to Your 1st QSO with completed ATS-3A !

I am going to finish it also as I will be happy to try 2-way ATS contact with...

Good luck and enjoy Your new baby,

72, Petr OK1RP

--- In AT_Sprint@yahoogroups.com, "Roland Whitsitt" <n5vwn@...> wrote:
>
> Mike, I must confess. The help I got from Steve was "hands on" help.
> He did it. It was getting to the point where my polking and probing
> was scratching up the board and DDS chip that I feared for it. So I
> bailed and sought professional help.
> N5VWN Roland
>

206. Re: [AT_Sprint] Re: 1st Contact

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-24 18:21:24 UTC
From: Michael Harnage
Topic: 199 Message: 206

No confession necessary. My first ATS (a dash 2)
developed a bad mpu from the sip pin puncturing the
battery problem. I had it narrowed to the mpu but was
not sure of how and why, so sent it back to Steve as
well. Doooh! It is all a learning process. Part of the
fun.

Enjoy the rig!

-mike

--- Roland Whitsitt <n5vwn@...> wrote:

> Mike, I must confess. The help I got from Steve was
> "hands on" help.

_____
Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

207. Re: [AT_Sprint] Murata SFE 7.02 Filters/DL2HRP mods

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-25 14:54:57 UTC
From: Lutz Bergner
Topic: 202 Message: 207

Hi Gil,

just read in the DL-QRP-AG forum: qrp-project(DL2FI) is temporarily
closed from Aug 3rd to Aug 25th due to holiday and other issues. If
you'd want the filters quick you had to hurry a bit ;-)

72s

Lutz

DL2HRP

Am Montag, den 24.07.2006, 12:08 +0000 schrieb nn4cw:
> I intend to order several Murata SFE 7.02 filters from Germany to use
> in implementing DL2HRP Lutz's mods on a 40 meter board in an ATS3
> (not
> 3a). If anyone else is interested in one or more of these filters
> contact me offline regarding costs.
> Gil NN4CW
>
>
>
>
>
--
iXadmin

---
* Systemadministration
* Netzwerkberatung
* Internetdienstleistungen

Tel.: 034922 66717
Fax.: 034922 66718
mobil: 0175 2631032
VOIP(sipgate): 01801 6666260511
Mail: l.bergner@...

208. Best head phones? & 2nd and 3rd qso

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-26 18:13:12 UTC
From: Roland Whitsitt
Topic: 208 Message: 208

I was wondering which is the best headphones for the ATS. I know it's a bit subjective, but I'd like to find what is best vs. cost. So far I've found that my XYL's i-pod's ear buds to be the best. But I'm not a fan of ear buds. I'd rather have somthing over my ear. Yet the i-pod ear buds sound better than my $40(on sale) kingston head phones. What are you guys using?
Roland
PS 2nd contact on 20 was in Hawaii, not much by DX standards from California, but I was very happy. The band wasn't even that good then. 3rd qso was about 200 miles away in Reno. That was a good 23 minute early afternoon qso on 40. The other fellow was using the famous kx1.

209. Re: [AT_Sprint] Best head phones? & 2nd and 3rd qso

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-26 18:35:07 UTC
From: Jeffrey Embry
Topic: 208 Message: 209

I use both the Sony earbuds (P/N Sony MDR-EX71SL) and a set of
el-cheapo no name noise cancelling headphones...just depends on what
the environment is at the time.

I like both.

--
Jeff Embry, K3OQ
FM19je
ARCI #11643
FPQRP #-696
NAQCC #25
AMSAT LM-2263

No trees were harmed in the sending of this message, however a large
number of electrons were terribly inconvenienced.

On 7/26/06, Roland Whitsitt <n5vwn@...> wrote:
> I was wondering which is the best headphones for the ATS. I know it's
> a bit subjective, but I'd like to find what is best vs. cost. So far
> I've found that my XYL's i-pod's ear buds to be the best. But I'm not
> a fan of ear buds. I'd rather have somthing over my ear. Yet the
> i-pod ear buds sound better than my $40(on sale) kingston head phones.
> What are you guys using?
> Roland
> PS 2nd contact on 20 was in Hawaii, not much by DX standards from
> California, but I was very happy. The band wasn't even that good
> then. 3rd qso was about 200 miles away in Reno. That was a good 23
> minute early afternoon qso on 40. The other fellow was using the
> famous kx1.
>
>
>
>
>
>
>
> Yahoo! Groups Links
>
>
>
>
>
>
>
>
>

210. Re: [AT_Sprint] Best head phones? & 2nd and 3rd qso

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-26 19:32:43 UTC
From: Michael Harnage
Topic: 208 Message: 210

Well, it sure is subjective. For the money, I think
the Koss "The Plug" are the best. For over the ear
Koss makes the Radio Shack Pro 35 (33-1222 being
discontinued at $20-- decent price). I notice that R/S
is going to sell the Koss version (33-1248 or
something like that) at double that price. Get the
33-1222 while you can. For ear buds, I happen to like
Sennheiser 550's (Circuit City, I think). They were
about $25 and sounds real nice.

If you want to spend more money, in the ear is the way
to go. Lots of makers (Shure, Ultimate Ears, etc).
These will cost any where from $100 and up. I don't
have a set yet but some on the list do and they work
quite well from what I have been told.

There is always the old standby Sony completely over
the ear headphones (MDR_7506) at about $80-$99 street
price. These are very nice and comfortable.

73 de w1mt
Mike

--- Roland Whitsitt <n5vwn@...> wrote:

> I was wondering which is the best headphones for the
> ATS. I know it's
> a bit subjective,

_____
Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

211. ATS3 has arrived!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-26 20:01:12 UTC
From: JT Croteau
Topic: 211 Message: 211

USPS just brought me a nice lil surprise here at work. It's my first ATS rig, an ATS3 I purchased late last week from W1RT.

Here she be:
http://img106.imageshack.us/img106/303/ats3jp5.jpg

I had John flash it with Mike's latest firmware before he shipped it.

I will probably begin repackaging it shortly in a slightly larger ABS enclosure with an internal 2200 mAH LiPoly pack to make it my weekend backpacking rig. I will probably order an ATS-3a in the near future for an ultra-lightweight Spartan Sprint build. Steve is almost sold out on the current batch so it won't be until the next batch most likely.

For now, I will try and get on the air this evening with her in her Wintergreen Altoids dress and a 9V battery. Thus far, the YL isn't too impressed judging by her "you paid $165.00 for that?" comment when I showed it to her. Oh well, she has her new found geocache obsession and I have my minimalist QRP CW obsession.

--
JT Croteau - W6FO - Canton, GA
ARS #2,147 | NoGA-QRP | SEDXC | ARRL

212. Re: [AT_Sprint] Best head phones? & 2nd and 3rd qso

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-26 20:03:41 UTC
From: Karl Larsen
Topic: 208 Message: 212

Hi Mike, the ones I use all the time I bought at Big Lots for $6.95.
They are COBY Digital Stereo headphones and all things considered they
are the best for all uses I have ever found. I bought 2 more pair and
have them held as spares.

73 Karl

Michael Harnage wrote:
> Well, it sure is subjective. For the money, I think
> the Koss "The Plug" are the best. For over the ear
> Koss makes the Radio Shack Pro 35 (33-1222 being
> discontinued at $20-- decent price). I notice that R/S
> is going to sell the Koss version (33-1248 or
> something like that) at double that price. Get the
> 33-1222 while you can. For ear buds, I happen to like
> Sennheiser 550's (Circuit City, I think). They were
> about $25 and sounds real nice.
>
> If you want to spend more money, in the ear is the way
> to go. Lots of makers (Shure, Ultimate Ears, etc).
> These will cost any where from $100 and up. I don't
> have a set yet but some on the list do and they work
> quite well from what I have been told.
>
> There is always the old standby Sony completely over
> the ear headphones (MDR_7506) at about $80-$99 street
> price. These are very nice and comfortable.
>
> 73 de w1mt
> Mike
>
> --- Roland Whitsitt <n5vwn@...> wrote:
>
>
>> I was wondering which is the best headphones for the
>> ATS. I know it's
>> a bit subjective,
>>

213. Re: Best head phones? & 2nd and 3rd qso

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-26 21:25:16 UTC
From: Dave
Topic: 208 Message: 213

I didn't feel too bad about saving weight by cutting one ear bud off of my $0.97 Wal-Mart special ear buds. And it doesn't sound too bad, particularly with the relatively narrow audio bandpass we are dealing with. I ended up buying a few more just to get the wire and plug.

When running the rig on the bench and not going for minimum weight, I use an old, powered PC speaker that has a volume control.

Dave, WA3OFF

214. Re: [AT_Sprint] Re: Best head phones? & 2nd and 3rd qso

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-26 21:44:15 UTC
From: Gil Stacy
Topic: 208 Message: 214
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

215. Possible ATS3 case

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-26 23:40:14 UTC
From: JT Croteau
Topic: 215 Message: 215

While rummaging around, I've come across a couple of these blue plastic boxes. Measuring 5-3/4" x 3-3/8" x 1-1/4" (LxWxH), they are a bit bigger than an Altoids but appear to weigh about the same because it's pretty thin plastic.

The hinges are formed plastic so I'm not sure how they will hold up in the long term.
However, it looks like there is enough room in here for my 2200 mAH LiPoly, filter board storage, and the ATS3. I can't start test fitting stuff together until the LIPO arrives from Hong Kong in a few days.

Here are a few pics -

Closed:
http://img207.imageshack.us/img207/9538/bluecase1ba1.jpg

Size Reference:
http://img66.imageshack.us/img66/24/bluecase2ot6.jpg

Open:
http://img353.imageshack.us/img353/3630/bluecase3qx6.jpg

I'm not sure what this case was originally used for.

--
JT Croteau - W6FO - Canton, GA
ARS #2,147 | NoGA-QRP | SEDXC | ARRL

216. Re: little blue ATS cases

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-27 11:53:49 UTC
From: JT Croteau
Topic: 216 Message: 216

On 7/27/06, n0tu/Steve <n0tu.qrp@...> wrote:
> So John where did you come by these cases? ...are they available for
> others to acquire? How does one find one? Steve/n0tu

Hi Steve. My YL and I own an aquarium maintenance business and retail store. These boxes came from scratch remover kits for acrylic tanks. I have no clue where they procured these boxes but they are a huge conglomerate and probably got them off shore in China or someplace.

I think I have two empty cases and one new kit sitting on the shelf.

--
JT Croteau - W6FO - Canton, GA
ARS #2,147 | NoGA-QRP | SEDXC | ARRL

217. Adjusting LF1 and LF2

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-27 14:01:54 UTC
From: Dave
Topic: 217 Message: 217

When running my ATS-3A on the 11.1V (more like 12V fully charged) Li-Po battery, I've noticed that it seems to put out about 5W on 80M and 30M while putting out only 3.5W on 40M and 3W on 20M (into a 50 ohm dummy load). A bit of testing showed that with the 40M module installed, I can get about 5W, but well above the ham bands, so I figured that adjusting LF1 and LF2 might help.

First I tried slightly changing the turns spacing. That didn't make any measurable difference. So then I tried adding turns to LF2 using leftover wire scraps. That seemed to help quite a bit. I ended up with two extra turns, raising the inductance of LF2 from 1.24 uH to 1.55 uH. To keep LF2/CF3 resonant at about 14 MHz (described in Steve's circuit description), I dropped the value of CF3 from 100 pF to 83 pF. Then, with my remaining wire scrap I added a turn to LF1, bringing it form 0.97 uH to 1.10 uh. At this point I'm getting about 5W on 40M.

Am I going about this the right way or am I just fooling myself somehow with the higher measured power readings? Am I just messing up the filter and letting more trash through or something? Peak power does seem to be showing up at about a 300 kHz lower frequency now. It seems that these changes move the cutoff frequency lower.

Perhaps I would be better off with only one additional turn on each toroid. What I'll probably try next is moving my 17-turn LF2 over to LF1 and and adding 2 turns to the original LF1 and moving it to LF2. (I'm trying not to cut my 1- and 2-turn wire scraps since it's all I have.) With LF2 at 1.39 uH, I think I'll want make CF3 about 93 pF.

Dave, WA3OFF

218. Re: [AT_Sprint] Adjusting LF1 and LF2

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-27 14:43:18 UTC
From: Michael Harnage
Topic: 217 Message: 218

L2F and C3F form a tank circuit that ideally should
knock down the 1st harmonic of the chosen band. They
should be adjusted with that purpose in mind. If power
peaks at that point then all the better. I subtracted
a turn from L2F on 80m and added a turn on 20m keeping
the caps the same. YMMF.

Ed Wetherhold/W3NGN wrote this filter up in the Feb
1999 QST. <
http://www.arrl.org/tis/info/pdf/9902044.pdf >

Steve designed this rig to get 2.5 watts at 9v and
that is where I try to get my rigs. What ever they get
at 11.1v (I use lipos too) after that is fine with me.

-mike/w1mt

--- Dave <dmertz@...> wrote:

> To keep LF2/CF3 resonant at
> about 14 MHz
> (described in Steve's circuit description),
>

Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

219. Re: Adjusting LF1 and LF2

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-28 00:52:00 UTC
From: Dave
Topic: 217 Message: 219

> If power peaks at that point then all the better.

I wasn't worried so much about where the power peak was (except to indicate which direction things needed to move) as I was about getting 40M to perform up to the level I was seeing on 80M and 30M. It was rather shy of 2.5W when running on 9V, suggesting that it could be improved.

> Ed Wetherhold/W3NGN wrote this filter up in the Feb
> 1999 QST. < http://www.arrl.org/tis/info/pdf/9902044.pdf >

Thanks, that's helpful. I need to study it some more to get a better handle on this stuff. I'm a bit fuzzy on return loss.

My values for CF3 may be a few percent high. I was using 14.0 instead of 14.3 for the resonant frequency.

My main concern is whether or not I was seeing higher output power at the expense of corrupting the design of the filter and preventing it from doing its job.

Dave, WA3OFF

220. Re: [AT_Sprint] Re: Adjusting LF1 and LF2

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-28 01:00:29 UTC
From: Michael Harnage
Topic: 217 Message: 220

I would use 14.0 too. Adjust the numbers in the
article accordingly.

I guess what I was trying to say was that I would go
for neutralizing the 1st harmonic primarily then
power.

Enjoy the rig!

-mike/w1mt

--- Dave <dmertz@...> wrote:

> My values for CF3 may be a few percent high. I was
> using 14.0
> instead of 14.3 for the resonant frequency.
>
> My main concern is whether or not I was seeing
> higher output power
> at the expense of corrupting the design of the
> filter and
> preventing it from doing its job.
>

Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

221. Just complete first set of tests

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-28 01:23:57 UTC
From: Jeff Embry (K3OQ)
Topic: 221 Message: 221

Guys,

A little slow at getting this rig together. This evening finally got around to the power up test. So far so good. Got the 20M indicator but, was unable to do all the voltage checks. I need to get a clip for the 9 volt battery. Thought I had one...but evidently did not. I can say this....hearing the 20M in CW was pure music to my ears.

Tomorrow I get the clip and finish the testing. Then finish the Band modules. Then we will play.

--
Jeff Embry, K3OQ
FM19je
ARCI #11643
FPQRP #-696
NAQCC #25
AMSAT LM-2263

No trees were harmed in the sending of this message, however a large number of electrons were terribly inconvenienced.

222. Re: [AT_Sprint] Adjusting LF1 and LF2

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-28 06:39:48 UTC
From: Lutz Bergner
Topic: 217 Message: 222

Hi

IMHO the match of the LP filter to the PA -FETs has a good potential of further optimization. For my ATS-3 I got some mods from David Meacham W6EMD which brought 3.4W /9V on all bands with 4.5W on 80m. Won't be showing off too much , but its true. And that's not the end. I heard from Fred DJ3KK who built the ATS-3 PA,driver section on a piece of PCB to analyse and improve the match. He achieved 5W/9V on 40m finally. At the moment he is building his 3A but I will encourage him to publish his findings. I hope for him to optimize the other bands as well ;-)
The LPF mods from David W6EDM have not been published yet AFAIK so I am not authorized to do this. --very sorry. Please ask him. He is on the QRP-L.

72/73

Lutz,DL2HRP

Am Donnerstag, den 27.07.2006, 14:01 +0000 schrieb Dave:
> When running my ATS-3A on the 11.1V (more like 12V fully charged)
> Li-Po battery, I've noticed that it seems to put out about 5W on 80M
> and 30M while putting out only 3.5W on 40M and 3W on 20M (into a 50
> ohm dummy load). A bit of testing showed that with the 40M module
> installed, I can get about 5W, but well above the ham bands, so I
> figured that adjusting LF1 and LF2 might help.
>
> First I tried slightly changing the turns spacing. That didn't make
> any measurable difference. So then I tried adding turns to LF2
> using leftover wire scraps. That seemed to help quite a bit. I
> ended up with two extra turns, raising the inductance of LF2 from
> 1.24 uH to 1.55 uH. To keep LF2/CF3 resonant at about 14 MHz
> (described in Steve's circuit description), I dropped the value of
> CF3 from 100 pF to 83 pF. Then, with my remaining wire scrap I
> added a turn to LF1, bringing it form 0.97 uH to 1.10 uh. At this
> point I'm getting about 5W on 40M.
>

223. Re: [AT_Sprint] Adjusting LF1 and LF2

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-28 12:19:53 UTC
From: w9ya@arrl.net
Topic: 217 Message: 223

Hey Lutz and the gang;

These mods are FB in my opinion. Anything to improve these fun little radios is fine by me.

I *also* hope that the someone will be publishing the harmonic results as well as the reported outputs.

i.e. Yesterday I loaned out my ATS-3A and it was analyzed at an RF lab. The results were fairly good and in some cases quite good as far as 2nd harmonic content was concerned. These measurements were done with the stock filters. (I think there was some issues with how the power tap was done as my P.O. readings I did two weeks ago differ, BUT the harmonic content should have remained the same regardless of that and the harmonic content readings were automatically given as dbc. i.e. decibels below carrier.)

(I dare not take the unit into my work and use the Spectrum Analyzer there, as I am on vacation, and they would give me things to fix if I showed up !!!)

Back to the point. Sometimes you can get greater output at the expense of, or because of, added harmonic content.

BTW if Steve gives me his blessing I will be happy to share the lab results. Until then the results will remain private. I really want him to *see them first* before I do release them publicly.

Vy 72;

Bob
w9ya

> Hi
>
> IMHO the match of the LP filter to the PA -FETs has a good potential of
> further optimization. For my ATS-3 I got some mods from David Meacham
> W6EMD which brought 3.4W /9V on all bands with 4.5W on 80m. Won't be
> showing off too much , but its true. And that's not the end. I heard
> from Fred DJ3KK who built the ATS-3 PA,driver section on a piece of PCB
> to analyse and improve the match. He achieved 5W/9V on 40m finally. At
> the moment he is building his 3A but I will encourage him to publish his
> findings. I hope for him to optimize the other bands as well ;-)
> The LPF mods from David W6EDM have not been published yet AFAIK so I am
> not authorized to do this. --very sorry. Please ask him. He is on the
> QRP-L.
>

> 72/73
>
> Lutz,DL2HRP
>
> Am Donnerstag, den 27.07.2006, 14:01 +0000 schrieb Dave:
>> When running my ATS-3A on the 11.1V (more like 12V fully charged)
>> Li-Po battery, I've noticed that it seems to put out about 5W on 80M
>> and 30M while putting out only 3.5W on 40M and 3W on 20M (into a 50
>> ohm dummy load). A bit of testing showed that with the 40M module
>> installed, I can get about 5W, but well above the ham bands, so I
>> figured that adjusting LF1 and LF2 might help.
>>
>> First I tried slightly changing the turns spacing. That didn't make
>> any measurable difference. So then I tried adding turns to LF2
>> using leftover wire scraps. That seemed to help quite a bit. I
>> ended up with two extra turns, raising the inductance of LF2 from 1.24
>> uH to 1.55 uH. To keep LF2/CF3 resonant at about 14 MHz
>> (described in Steve's circuit description), I dropped the value of CF3
>> from 100 pF to 83 pF. Then, with my remaining wire scrap I
>> added a turn to LF1, bringing it form 0.97 uH to 1.10 uh. At this
>> point I'm getting about 5W on 40M.
>>

224. Re: [AT_Sprint] Adjusting LF1 and LF2

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-28 13:29:50 UTC
From: Michael Harnage
Topic: 217 Message: 224

John/AE5X has published his findings already.
Check out < http://www.ae5x.com/ats3.html > and scroll
abt 25% down to see John's spectrum analysis of and
ATS3.

-mike/w1mt

--- w9ya@... wrote:

> i.e. Yesterday I loaned out my ATS-3A and it was
> analyzed at an RF lab.
> The results were fairly good and in some cases quite
> good as far as 2nd
> harmonic content was concerned.

_____
Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

225. Got this from another mailing list....

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-28 14:42:56 UTC
From: Jeffrey Embry
Topic: 225 Message: 225

and thought it might be of use to us.

http://kitsandparts.com/kitsandparts/tcalc.html

Let me know if I am off base or not.

--
Jeff Embry, K3OQ
FM19je
ARCI #11643
FPQRP #-696
NAQCC #25
AMSAT LM-2263

No trees were harmed in the sending of this message, however a large
number of electrons were terribly inconvenienced.

226. Re: [AT_Sprint] Adjusting LF1 and LF2

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-28 14:54:41 UTC
From: w9ya@arrl.net
Topic: 217 Message: 226

Hey Mike and the gang;

The 3 and 3A *ARE* different in the output filtering as I recall. John's web page measured a 3. The radio I just had at the RF lab is a 3A.

Changes in the output filtering circuits (probably) WILL change the results at least enough to be noted. In some cases these changes might be dramatic. But I will let the testing results speak for themselves as to how significant such differences may be.

Vy 72;

Bob
w9ya

P.S... I was just now going over your coding and it is VERY nice. FB OM !!

> John/AE5X has published his findings already.
> Check out < http://www.ae5x.com/ats3.html > and scroll
> abt 25% down to see John's spectrum analysis of and
> ATS3.
>
> -mike/w1mt
>
> --- w9ya@... wrote:
>
>> i.e. Yesterday I loaned out my ATS-3A and it was
>> analyzed at an RF lab.
>> The results were fairly good and in some cases quite
>> good as far as 2nd
>> harmonic content was concerned.
>
> _____

227. Re: [AT_Sprint] Re: Adjusting LF1 and LF2

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-28 16:02:22 UTC
From: Steven Weber
Topic: 217 Message: 227

>My main concern is whether or not I was seeing higher output power
>at the expense of corrupting the design of the filter and
>preventing it from doing its job.
>
So long as you don't stray too far from the original, you should be safe.

I picked 2.5 watts at 9 volts as a good compermise between reasonable power out, Tx current, effiecentcy and not having the power out get dangerously high when using 12 volts.

The output of the 3A is a bit cleaner than the 3's. The -3 was a bit marginal, because of blow by. On the 3A, I moved the ground pin to be between the in and the out of the filter and moved the parts around to get better isolation between the in and out.

When playing with the filter, its a good idea to monitor PA effiecentcy. You can put an amp meter in series with the supply and subtract out 40--50 ma (depends on band) to get the PA current, then measure the voltage going into L3. More power out can often result in much poorer effiecentcy. And of course, its really nice to have a spectrum analzer, so you can make sure your not degrading the filter.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

228. Re: [AT_Sprint] Adjusting LF1 and LF2

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-28 16:27:59 UTC
From: Michael Harnage
Topic: 217 Message: 228

On transmit the major change is that C1F is larger for each band. The basic harmonic trap is essentially the same (a turn or two change on the tank inductor for a couple of bands). The inductor before the antenna on the main board is also different. I would be very interested in seeing the results of testing on the 3A for comparisons sake. Any chance you might mod the filters for maximum harmonic dampening then run it thru the rf lab again?

This is good stuff, I enjoy hearing what others are doing with their rigs!

-mike/w1mt

--- w9ya@... wrote:

>
> The 3 and 3A *ARE* different in the output filtering
> as I recall. John's
> web page measured a 3. The radio I just had at the
> RF lab is a 3A.
>

_____
Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

229. Re: Adjusting LF1 and LF2

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-28 16:42:55 UTC
From: Dave
Topic: 217 Message: 229

Steve, thanks for the suggestion on monitoring PA efficiency.
Certainly with the desire to minimize battery weight for the Spartan
Sprints, efficiency is important.

I'm deficient in spectrum analyzer equipment. I would enjoy actually
measuring the differences as I tweak the filters. Maybe I'll start
shopping for one.

Dave

230. Re: [AT_Sprint] Adjusting LF1 and LF2

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-29 03:18:03 UTC
From: w9ya@arrl.net
Topic: 217 Message: 230

Hey Mike and the gang;

Before anything else I need to do two things: Find out the
characterization of the power tap used for the measurements...and

Then get Steve's o.k. to publish the results. Perhaps after he sees them
<- if he chooses to do so.

Vy 72;

Bob
w9ya

> On transmit the major change is that C1F is larger for
> each band. The basic harmonic trap is essentially the
> same (a turn or two change on the tank inductor for a
> couple of bands). The inductor before the antenna on
> the main board is also different. I would be very
> interested in seeing the results of testing on the 3A
> for comparisons sake. Any chance you might mod the
> filters for maximum harmonic dampening then run it
> thru the rf lab again?
>
> This is good stuff, I enjoy hearing what others are
> doing with their rigs!
>
> -mike/w1mt
>
> --- w9ya@... wrote:
>
>>
>> The 3 and 3A *ARE* different in the output filtering
>> as I recall. John's
>> web page measured a 3. The radio I just had at the
>> RF lab is a 3A.
>>
>
> _____
> Do You Yahoo!?
> Tired of spam? Yahoo! Mail has the best spam protection around
> http://mail.yahoo.com
>
>
>
> Yahoo! Groups Links
>

>
>
>

231. Re: [AT_Sprint] Adjusting LF1 and LF2

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-29 14:21:37 UTC
From: Karl Larsen
Topic: 217 Message: 231

w9ya@... wrote:
> Hey Mike and the gang;
>
> Before anything else I need to do two things: Find out the
> characterization of the power tap used for the measurements...and
>
> Then get Steve's o.k. to publish the results. Perhaps after he sees them
> <- if he chooses to do so.
>
> Vy 72;
>
> Bob
> w9ya
>
>
>
>> On transmit the major change is that C1F is larger for
>> each band. The basic harmonic trap is essentially the
>> same (a turn or two change on the tank inductor for a
>> couple of bands). The inductor before the antenna on
>> the main board is also different. I would be very
>> interested in seeing the results of testing on the 3A
>> for comparisons sake. Any chance you might mod the
>> filters for maximum harmonic dampening then run it
>> thru the rf lab again?
>>
>> This is good stuff, I enjoy hearing what others are
>> doing with their rigs!
>>
>> -mike/w1mt
>>
>> --- w9ya@... wrote:
>>
>>
>>> The 3 and 3A *ARE* different in the output filtering
>>> as I recall. John's
>>> web page measured a 3. The radio I just had at the
>>> RF lab is a 3A.
>>>
>>>
I think this is a lot about nothing. I built a 3 early and followed
Steve's instructions. Then counted the turns on the toroid(s), took both
out on 80 meters and re-wound them. Then I got around 2.5 watts with 9
volts and it has worked just fine.

73 Karl K5DI

232. ATS Antenna Jack Wiring

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-30 20:07:53 UTC
From: JT Croteau
Topic: 232 Message: 232

This may be a silly question to some but I'm still a newbie to homebrewing and kit building and need to ask.

As I begin to repackage my ATS3 into an "all-in-one" package in a larger case with room for batteries, paddles, antenna, etc., I've just thought of something that I hadn't really given any thought to before.

This will be my backpacking/bed side rig, and to best accomodate operating comfort, all jacks will be on one end of the box. This means the antenna jack will be on the far opposite of the case from the solder point on the ATS3 circuit board. Ideally, one usually wants to keep the antenna wiring as short as possible but this config will require an 8" to 10" run from the board to the jack (BNC). Will I take a noticeable perfomance hit or experience stray RF problems with this long of a seperation distance? I have a small stash of low loss coax that is used with Motorola 800 MHz mobile antennas that I was planning on using. It's a tad smaller and more flexible than RG-174 and supposedly considerably less loss

Thanks

--
JT Croteau - W6FO - Canton, GA
ARS #2,147 | NoGA-QRP | SEDXC | ARRL

233. Need help trouble shooting ATS3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-31 19:57:33 UTC
From: Glenn Maclean
Topic: 233 Message: 233

I just finished putting together my ATS3A. The calibration of the 10 MHZ osciallator went fine. Centering the filters went well also. The voltages on all of the IC's are per the chart in the manual without the filter board installed. All of the menus work. RIT works, tuning up and down works, and storing messages in memory works.

Here is the issue I am having. I do not hear any floor noise when I connect the antenna. I do not hear any signals. If I put a metal screw driver at the rx in side of C1 the receiver comes alive. I can also put a screw driver on P1 of the filter board when it is installed and the receiver works. I have tried peaking the trimmer caps on the filter board and it does not seem to help. I have the same problem with the 20 and 40 meter filter boards. I have not built the 80 and 30 filter boards yet. I have triple checked the cap values and locations on the filter boards and they are correct, The toroid windings are correct as well as well as the proper cores in the proper locations.

Any help as to where my problem might be would be appreciated.

Thanks,
Glenn Maclean WA7SPY

234. Re: [AT_Sprint] Need help trouble shooting ATS3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-31 20:34:41 UTC
From: Michael Harnage
Topic: 233 Message: 234

Hi Glenn,

When the rx "comes alive" does that mean that you can hear signals where they are supposed to be? (Another tx or signal generator is heard where you expect?)

I would start with the 20m board (it is simpler) and try the non-grounded sides of C5F and CT3 with the screwdriver to see if you get reception. If those two caps are OK then you should get reception. Then I would try the left most hole for L3. This should be the non grounded primary end. If that fails and I am guessing that it will, you probably have a problem with the transformer (LF3). Triple check how it is wired to the board. The outside two holes are for the primary (large number of windings) and the inside two holes (smaller number of windings) are for the secondary.

If this fails come back with what you found and we try to proceed from there.

-mike/w1mt

--- Glenn Maclean <wa7spy@...> wrote:

> I just finished putting together my ATS3A. The
> calibration of the 10 MHZ
> osciallator went fine. Centering the filters went
> well also. The
> voltages on all of the IC's are per the chart in the
> manual without
> the filter board installed. All of the menus work.
> RIT works, tuning
> up and down works, and storing messages in memory
> works.
>
> Here is the issue I am having. I do not hear any
> floor noise when I
> connect the antenna. I do not hear any signals. If I
> put a metal screw
> driver at the rx in side of C1 the receiver comes
> alive. I can also
> put a screw driver on P1 of the filter board when it
> is installed and
> the receiver works. I have tried peaking the trimmer

> caps on the
> filter board and it does not seem to help. I have
> the same problem
> with the 20 and 40 meter filter boards. I have not
> built the 80 and 30
> filter boards yet. I have triple checked the cap
> values and locations
> on the filter boards and they are correct, The
> toroid windings are
> correct as well as well as the proper cores in the
> proper locations.
>
> Any help as to where my problem might be would be
> appreciated.
>
> Thanks,
> Glenn Maclean WA7SPY
>
>
>

Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

235. Re: [AT_Sprint] Need help trouble shooting ATS3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-07-31 21:25:35 UTC
From: Karl Larsen
Topic: 233 Message: 235

Hi Mike, excellant ideas and I bet Glenn gets it working. The rig is tuning up proper and my money is on LF3 being bad or, my trick, a pin not soldered.

73 Karl K5DI

Michael Harnage wrote:
> Hi Glenn,
>
> When the rx "comes alive" does that mean that you can
> hear signals where they are supposed to be? (Another
> tx or signal generator is heard where you expect?)
>
> I would start with the 20m board (it is simpler) and
> try the non-grounded sides of C5F and CT3 with the
> screwdriver to see if you get reception. If those two
> caps are OK then you should get reception. Then I
> would try the left most hole for L3. This should be
> the non grounded primary end. If that fails and I am
> guessing that it will, you probably have a problem
> with the transformer (LF3). Triple check how it is
> wired to the board. The outside two holes are for the
> primary (large number of windings) and the inside two
> holes (smaller number of windings) are for the
> secondary.
>
> If this fails come back with what you found and we try
> to proceed from there.
>
> -mike/w1mt
>
>
> --- Glenn Maclean <wa7spy@...> wrote:
>
>
>> I just finished putting together my ATS3A. The
>> calibration of the 10 MHZ
>> osciallator went fine. Centering the filters went
>> well also. The
>> voltages on all of the IC's are per the chart in the
>> manual without
>> the filter board installed. All of the menus work.
>> RIT works, tuning
>> up and down works, and storing messages in memory
>> works.

>>
>> Here is the issue I am having. I do not hear any
>> floor noise when I
>> connect the antenna. I do not hear any signals. If I
>> put a metal screw
>> driver at the rx in side of C1 the receiver comes
>> alive. I can also
>> put a screw driver on P1 of the filter board when it
>> is installed and
>> the receiver works. I have tried peaking the trimmer
>> caps on the
>> filter board and it does not seem to help. I have
>> the same problem
>> with the 20 and 40 meter filter boards. I have not
>> built the 80 and 30
>> filter boards yet. I have triple checked the cap
>> values and locations
>> on the filter boards and they are correct, The
>> toroid windings are
>> correct as well as well as the proper cores in the
>> proper locations.
>>
>> Any help as to where my problem might be would be
>> appreciated.
>>
>> Thanks,
>> Glenn Maclean WA7SPY
>>
>>
>>
>>
>
> _____
> Do You Yahoo!?
> Tired of spam? Yahoo! Mail has the best spam protection around
> http://mail.yahoo.com
>
>
>
> Yahoo! Groups Links
>
>
>
>
>
>
>
>
>
>
>

237. Re: [AT_Sprint] Need help trouble shooting ATS3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-01 02:38:46 UTC
From: w9ya@arrl.net
Topic: 233 Message: 237

Hey Glenn;

You got the right idea about how to troubleshoot this. Just keep looking for signal as you go further "downstream" toward the antenna. When the signal is no longer there you will have found the shunt (short to ground) or open path.

Often this is a bad connection of a wire lead associated with the coils. Sometimes the enamel or plastic coating is hard to fully remove and is preventing a good solder connection and thereby the signal flow.

GL OM es

Vy 72;

Bob
w9ya

> I just finished putting together my ATS3A. The calibration of the 10 MHZ
> osciallator went fine. Centering the filters went well also. The
> voltages on all of the IC's are per the chart in the manual without the
> filter board installed. All of the menus work. RIT works, tuning up and
> down works, and storing messages in memory works.
>
> Here is the issue I am having. I do not hear any floor noise when I
> connect the antenna. I do not hear any signals. If I put a metal screw
> driver at the rx in side of C1 the receiver comes alive. I can also put
> a screw driver on P1 of the filter board when it is installed and the
> receiver works. I have tried peaking the trimmer caps on the
> filter board and it does not seem to help. I have the same problem with
> the 20 and 40 meter filter boards. I have not built the 80 and 30 filter
> boards yet. I have triple checked the cap values and locations on the
> filter boards and they are correct, The toroid windings are correct as
> well as well as the proper cores in the proper locations.
>
> Any help as to where my problem might be would be appreciated.
>
> Thanks,
> Glenn Maclean WA7SPY
>
>
>
>
>
>
>

> Yahoo! Groups Links
>
>
>
>

238. Re: [AT_Sprint] Need help trouble shooting ATS3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-01 03:42:18 UTC
From: Glenn Maclean
Topic: 233 Message: 238

Michael Harnage wrote:
>
> Hi Glenn,
>
> When the rx "comes alive" does that mean that you can
> hear signals where they are supposed to be? (Another
> tx or signal generator is heard where you expect?)
>
> I would start with the 20m board (it is simpler) and
> try the non-grounded sides of C5F and CT3 with the
> screwdriver to see if you get reception. If those two
> caps are OK then you should get reception. Then I
> would try the left most hole for L3. This should be
> the non grounded primary end. If that fails and I am
> guessing that it will, you probably have a problem
> with the transformer (LF3). Triple check how it is
> wired to the board. The outside two holes are for the
> primary (large number of windings) and the inside two
> holes (smaller number of windings) are for the
> secondary.
>
> If this fails come back with what you found and we try
> to proceed from there.
>
> -mike/w1mt
>
> --- Glenn Maclean <wa7spy@... <mailto:wa7spy%40comcast.net>>
> wrote:
>
> > I just finished putting together my ATS3A. The
> > calibration of the 10 MHZ
> > osciallator went fine. Centering the filters went
> > well also. The
> > voltages on all of the IC's are per the chart in the
> > manual without
> > the filter board installed. All of the menus work.
> > RIT works, tuning
> > up and down works, and storing messages in memory
> > works.
> >
> > Here is the issue I am having. I do not hear any
> > floor noise when I
> > connect the antenna. I do not hear any signals. If I
> > put a metal screw
> > driver at the rx in side of C1 the receiver comes

> > alive. I can also
> > put a screw driver on P1 of the filter board when it
> > is installed and
> > the receiver works. I have tried peaking the trimmer
> > caps on the
> > filter board and it does not seem to help. I have
> > the same problem
> > with the 20 and 40 meter filter boards. I have not
> > built the 80 and 30
> > filter boards yet. I have triple checked the cap
> > values and locations
> > on the filter boards and they are correct, The
> > toroid windings are
> > correct as well as well as the proper cores in the
> > proper locations.
> >
> > Any help as to where my problem might be would be
> > appreciated.
> >
> > Thanks,
> > Glenn Maclean WA7SPY
> >
> >
> >
>
> _____
> Do You Yahoo!?
> Tired of spam? Yahoo! Mail has the best spam protection around
> http://mail.yahoo.com <http://mail.yahoo.com>
>
>
Hi Mike,
Thank you for all of your suggestions. I played with the ATS3A tonight and tried your suggestions. I could find nothing wrong. I was getting noise with the screw driver touching all the points you suggested. I started playing with my antenna connection. I noticed if I disconnected the ground to my Pl259 connector that went to the BNC adapter I was able to hear floor noise and cw signals on both the 20 meter and 40 meter filter boards. I was also able to peak the noise on both the 20 and 40 meter filter boards by adjusting the trimmer caps. I think I may have a problem with my antenna which is a Carolina Windom from Radio Works which is many years old. I am going to have to look into this further.

I am getting 3 watts output with a dummy load and the power supply set to 11 volts. As far as I can tell the ATS3A is now working as advertised. Now it is on to packaging it up. I think I am going to bend up some metal and make my own case. I work on corporate jet airplanes for a living. I have plenty of access to sheet metal and sheet metal tools.

Thanks again for everyones suggestions.
Glenn WA7SPY

239. Re: [AT_Sprint] Need help trouble shooting ATS3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-01 12:21:47 UTC
From: Michael Harnage
Topic: 233 Message: 239

FB job. I would make sure it was the antenna by
checking it for continuity.

I spend way more time putting my ATS rigs in
enclosure's than I do building them. :) Have fun and
show us some pics when you get done.

-mike

--- Glenn Maclean <wa7spy@...> wrote:

> I was getting
> noise with the screw driver touching all the points
> you suggested. I
> started playing with my antenna connection. I
> noticed if I disconnected
> the ground to my Pl259 connector that went to the
> BNC adapter I was
> able to hear floor noise and cw signals on both the
> 20 meter and 40
> meter filter boards. I was also able to peak the
> noise on both the 20
> and 40 meter filter boards by adjusting the trimmer
> caps. I think I may
> have a problem with my antenna which is a Carolina
> Windom from Radio
> Works which is many years old. I am going to have
> to look into this
> further.
>

Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

240. Re: [AT_Sprint] Need help trouble shooting ATS3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-01 15:25:45 UTC
From: Lutz Bergner
Topic: 233 Message: 240

Hi,

My favourite tool for such kind of trouble is a small wideband_noise generator probe. I use it to set up all stages from lf , if to the bandfilters. Every kit builder should have one It's so easy to build and really cheap. I guess there is even a source for kits over there in the US. At least here in EU are some.

72s

Lutz

Am Montag, den 31.07.2006, 13:34 -0700 schrieb Michael Harnage:
> Hi Glenn,
>
> When the rx "comes alive" does that mean that you can
> hear signals where they are supposed to be? (Another
> tx or signal generator is heard where you expect?)

241. Re: [AT_Sprint] Need help trouble shooting ATS3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-01 16:21:38 UTC
From: Gil Stacy
Topic: 233 Message: 241
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

242. ATS-3A with BGA placer by OK1RP

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-01 17:12:26 UTC
From: Petr Ourednik
Topic: 204 Message: 242

Hi folks,

another part of job done on my ATS-3.

Unfortunately I have lot of breaks as I am really bussy now but the top side of main board with buttons and other parts is finished.

On bottom side of main board is finaly uP and few elyt.caps installed.

Now I have to install all connectors, caps, trimer and finaly the toroid and seems to be all job on main board finished.

I am starting to thinking about the housing as I would like to have pretty matched to operate outside the QTH > so probably it will have to be builded the Lipol battery and for sure any type of ATU.

Now also the big job of assembling the band modules coming > wow...;)

See new pics in Photos/OK1RP if You like it. Finaly there is no BGA placer anymore used...

72, Petr OK1RP

243. Re: [AT_Sprint] ATS-3A with BGA placer by OK1RP

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-01 17:21:02 UTC
From: JT Croteau
Topic: 204 Message: 243

On 8/1/06, Petr Ourednik <indians@...> wrote:
> another part of job done on my ATS-3.

Awesome work Petr, love the pics. Thanks for sharing.

--
JT Croteau - W6FO - Canton, GA
ARS #2,147 | NoGA-QRP | SEDXC | ARRL

245. Re: ATS Antenna Jack Wiring

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-02 23:38:45 UTC
From: Nick Kennedy
Topic: 232 Message: 245

My opinion is that since you are running coax from the output of the
board to the jack, you'll have on problems at all.

72--Nick, WA5BDU

--- In AT_Sprint@yahoogroups.com, "JT Croteau" <jt.w6fo@...> wrote:
>
Ideally, one usually
> wants to keep the antenna wiring as short as possible but this config
> will require an 8" to 10" run from the board to the jack (BNC). Will
> I take a noticeable perfomance hit or experience stray RF problems
> with this long of a seperation distance? I have a small stash of low
> loss coax that is used with Motorola 800 MHz mobile antennas that I
> was planning on using. It's a tad smaller and more flexible than
> RG-174 and supposedly considerably less loss
>
> Thanks

246. Another ATS 3A comes to life

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-03 04:14:07 UTC
From: camqrp
Topic: 246 Message: 246

Yes, another ATS-3A took it's first breath the other day. I couldn't belive it, but when I plugged it in, it played right off. Hard to imagine I got all those little No-See-Um parts soldered in right the first time, and didn't solder all the processor leads together into one big mass of silver. These old eyes needed lots of help!

A question for the group: The T-R transition is pretty smooth in the key down (receive-to-transmit) changeover, but I get a pretty good click or thump in the transition back to receive (key up). Is this the norm, or do I need to go sniffing around for a problem? In addition, the audio doesn't sound as clean as I'd like. With a strong signal, it sounds like one of the stages is being over driven, and the audio takes on a distortion that sounds almost like it is being clipped or squared.

Any thought would be appreciated.

Thanks,

Cam N6GA

247. Re: [AT_Sprint] Another ATS 3A comes to life

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-03 12:07:26 UTC
From: Karl Larsen
Topic: 246 Message: 247

camqrp wrote:
> Yes, another ATS-3A took it's first breath the other day. I couldn't
> belive it, but when I plugged it in, it played right off. Hard to
> imagine I got all those little No-See-Um parts soldered in right the
> first time, and didn't solder all the processor leads together into
> one big mass of silver. These old eyes needed lots of help!
>
> A question for the group: The T-R transition is pretty smooth in the
> key down (receive-to-transmit) changeover, but I get a pretty good
> click or thump in the transition back to receive (key up). Is this the
> norm, or do I need to go sniffing around for a problem? In addition,
> the audio doesn't sound as clean as I'd like. With a strong signal, it
> sounds like one of the stages is being over driven, and the audio
> takes on a distortion that sounds almost like it is being clipped or
> squared.
>
> Any thought would be appreciated.
>
It sounds like you have a problem around the audio output chip. The
loud pop when you let up on the key is not normal. The distorted audio
is not normal. There is the AGC chip that should correct the distortion.

It's quite possible both symptoms are caused by the same wiring
error. Get your eye help and just look at all the things including the
audio chip. There is something wrong.

73 Karl K5DI

> Thanks,
>
> Cam N6GA
>
>
>
>
>
>
>
>
>
> Yahoo! Groups Links
>
>
>
>
>
>
>

>
>
>
>

248. Re: Another ATS 3A comes to life

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-03 15:17:49 UTC
From: Dave
Topic: 246 Message: 248

> The T-R transition is pretty smooth in the
> key down (receive-to-transmit) changeover, but I get a pretty good
> click or thump in the transition back to receive (key up).

Depending on the extent, this might be somewhat normal. The keying circuit has an RC network to slow the rise and fall to about 5 ms (according to Steve's write-up). There are delays built into the code between TX off and mute off, but maybe they aren't quite long enough. You might check the rise and fall time in the codeThis may be long enough for the software to switch off the mute, allowing the receiver to hear a bit of the declineing output. You could use an o'scope on the power entering L3 (the tab of Q4) to see if the fall time is longer than it should be due to an incorrect value for C42, C43 or R14.

> In addition, the audio doesn't sound as clean as I'd like. With a
> strong signal, it sounds like one of the stages is being over
> driven, and the audio takes on a distortion that sounds almost
> like it is being clipped or squared.

The AGC, which can take a moment to respond to strong signals, should be taking care of this. This isn't just an iddue with your earphones, is it?

Dave, WA3OFF

249. Re: [AT_Sprint] Re: Another ATS 3A comes to life

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-03 16:58:37 UTC
From: w9ya@arrl.net
Topic: 246 Message: 249

Hey Dave and the gang;

Actually if you view your rig's ramp-up and ramp-down of the keying envelope, by watching your RF output on a (decent/good) scope, you can see the differences in timing vs. incoming dc voltage. You can also see how "stiff" the supply is (dc rail sag).

And yes there is a thump, which is noticeable during bench testing. Much if not almost all of it seems to be "masked" (covered up) by band noise when hooked to a "matched" antenna system. Well at least with the summer noise levels.

The only other comment is to state the obvious. Lengthen the "turn-around time" alloted in the software may degrade the qsk performance, such that it is currently.

Vy 72;

Bob
w9ya

>> The T-R transition is pretty smooth in the
>> key down (receive-to-transmit) changeover, but I get a pretty good
>> click or thump in the transition back to receive (key up).
>
> Depending on the extent, this might be somewhat normal. The keying
> circuit has an RC network to slow the rise and fall to about 5 ms
> (according to Steve's write-up). There are delays built into the
> code between TX off and mute off, but maybe they aren't quite long
> enough. You might check the rise and fall time in the codeThis may be
> long enough for the software to switch off the mute, allowing the
> receiver to hear a bit of the declineing output. You could use an
> o'scope on the power entering L3 (the tab of Q4) to see if the fall time
> is longer than it should be due to an incorrect value for C42, C43 or
> R14.
>
>> In addition, the audio doesn't sound as clean as I'd like. With a
>> strong signal, it sounds like one of the stages is being over
>> driven, and the audio takes on a distortion that sounds almost
>> like it is being clipped or squared.
>
> The AGC, which can take a moment to respond to strong signals,
> should be taking care of this. This isn't just an iddue with your
> earphones, is it?
>
> Dave, WA3OFF

>
>
>

250. ATS-3A with BGA placer by OK1RP comes to life

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-03 17:39:37 UTC
From: Petr Ourednik
Topic: 250 Message: 250

Hi folks,

today I completed the main board incl. the programmer connector. When I finished the daily job in company I took the ATS-3A to lab for first smoke test on bench...

It's like music to the ear hearing the "20m" morse code from the earphones immediatelly after power up for fisrt time :)

All steps from the Part I. of bench tests in manual has been done w/o troubles.

Just only two notes :

- there is bad connection in power connector (seems like bad contact inside of grey box on the PCB > will need to replace)
- the voltage on Q4 drain comes to 4.9V max instead of full DC input (9V). Then decline to 0V when stopped the dashes from the paddle. (measured by Fluke 189 true RMS model) Could be the problem?

The pics from thelab I added to Photos of course.

I am going to work on band modules...

72, Petr OK1RP

251. Re: [AT_Sprint] ATS-3A with BGA placer by OK1RP comes to life

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-03 18:13:28 UTC
From: Michael Harnage
Topic: 250 Message: 251

Very good!

Put the drain of Q4 on a scope and see what you get.
If you are using a 9V battery (small rectangular type)
then replace with a more capable power source. 6 x
1.5v AA alkaline cells or 8 x 1.2v AA rechargable
cells will give a capable 9v supply. Those 9v
batteries are not capable of supplying the current
necessary for transmit and that may be what you are
"seeing".

-mike/w1mt

--- Petr Ourednik <indians@...> wrote:

>
> It's like music to the ear hearing the "20m" morse
> code from the
> earphones immediatelly after power up for fisrt time
> :)
>
> All steps from the Part I. of bench tests in manual
> has been done w/o
> troubles.
>
> Just only two notes :
>
> - there is bad connection in power connector (seems
> like bad contact
> inside of grey box on the PCB > will need to
> replace)
> - the voltage on Q4 drain comes to 4.9V max instead
> of full DC input
> (9V). Then decline to 0V when stopped the dashes
> from the paddle.
> (measured by Fluke 189 true RMS model) Could be the
> problem?
>

_____
Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

252. Tests

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-03 18:38:20 UTC
From: Karl Larsen
Topic: 252 Message: 252

I put a 10 AA battery pack (rechargeable) and my ATS-3 with Mike W1MT's software of last year in it has no loud pop on key up and it doesn't overload with big signals on 20 meters with a good beam.

I'm pretty sure something is wrong with Cam's rig. But some could be due to a bad battery too :-)

73 Karl K5DI

253. Re: [AT_Sprint] Another ATS 3A comes to life

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-03 22:31:13 UTC
From: Steven Weber
Topic: 246 Message: 253

>A question for the group: The T-R transition is pretty smooth in the
>key down (receive-to-transmit) changeover, but I get a pretty good
>click or thump in the transition back to receive (key up).

Totally eliminating thumps is pretty hard, but it should be barely noticable. Check the connections on the mute switch, there might be a bad or marginal one there. Also, cleaning off the flux can help. A very soft power supply can exagerate thumps, but it would have to be droping below 6 volts.

Is this the
>norm, or do I need to go sniffing around for a problem? In addition,
>the audio doesn't sound as clean as I'd like. With a strong signal, it
>sounds like one of the stages is being over driven, and the audio
>takes on a distortion that sounds almost like it is being clipped or
>squared.

Very strong signals are clipped by the back to back diodes on the first audio amp. These keep the AGC amp from overloading, distorting and taking a long time to recover. It makes the audio a little raspy, but the audio band pass filter smothes it out so its not as bad as it could be. The problem your having might be related to the thump too.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

254. Re: [AT_Sprint] ATS-3A with BGA placer by OK1RP comes to life

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-03 22:15:26 UTC
From: Steven Weber
Topic: 250 Message: 254

>- there is bad connection in power connector (seems like bad contact
>inside of grey box on the PCB > will need to replace)
>

I haven't really had an problem with these and no othe reports, be sure the plug is firmly inserted all the way. It can be a little stiff the first few times.

- the voltage on Q4 drain comes to 4.9V max instead of full DC input
>(9V). Then decline to 0V when stopped the dashes from the paddle.
>(measured by Fluke 189 true RMS model) Could be the problem?

I belive your seeing an avarage voltage if your sending dashes. Put it in straight key or tune mode and it should go to DC in less the protection diode drop, about 300 mv.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

255. Re: Tests

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-03 23:01:25 UTC
From: Dave
Topic: 252 Message: 255

I checked my rig again and what I get on key-up is a *slight* click or chirp that is really only noticeable when keying into the (quiet) dummy load. When connected to the antenna, even mild QRN really does mask it pretty well. So if yours is pronounced, that could indicate a problem.

I thought maybe there was a difference based on how much power the rig was putting out, but I noticed no difference when I switched from my 12V Li-Po battery to a dead (5.7V during Tx, 7.something during Rx) 9V battery.

Regarding the distortion, make sure that C26 is the correct value (10uF). According to the chip's datasheet, lower values of this capacitor increase the distortion produced by the AGC chip. In fact, give all of the parts in the audio section a good looking over, particularly the resistors and capacitors.

Dave, WA3OFF

--- In AT_Sprint@yahoogroups.com, Karl Larsen <k5di@...> wrote:
>
> I put a 10 AA battery pack (rechargeable) and my ATS-3 with Mike
> W1MT's software of last year in it has no loud pop on key up and it
> doesn't overload with big signals on 20 meters with a good beam.
>
> I'm pretty sure something is wrong with Cam's rig. But some
could be
> due to a bad battery too :-)
>
>
> 73 Karl K5DI
>

256. Black Dress Progress

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-05 01:17:38 UTC
From: JT Croteau
Topic: 256 Message: 256

Not much progress as I am still waiting for a few parts to come in.

I just mounted the 2200 mAH Li-Poly battery using "extreme" velcro and took the following inside pic:

http://img383.imageshack.us/img383/3671/batinstallyo8.jpg

I wanted to keep the onboard jacks in case I ever wanted to put the rig back in an Altoids so I remoted them by wiring up some stereo plugs to the stereo jacks on top of the case. I used your basic gold stereo plugs from Radio Shack but it looked too bulky and weird with the barrel connector on so I left them off and just heat shrinked the wiring.

Now waiting on JST connectors and RG-316 to arrive. Additionally, a #2 screw from Steve as one of them was stripped pretty bad by the PO when I went to remove the ATS from the Altoids case. Neither Homo Depot or Lowes have screws smaller than #4's, major bummer.

I also need to decide on a paddle. I've used the Bulldog mini paddle before and it felt fine but I am also considering Doug Hauff's Porta-Paddle. I just love that blue annodized finish. However, it is twice the cost of the Bulldog. Either one would mount nicely on the top of the case.

- JT

257. Re: Another ATS 3A comes to life

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-05 04:35:35 UTC
From: camqrp
Topic: 246 Message: 257

> Very strong signals are clipped by the back to back diodes on the first
> audio amp. These keep the AGC amp from overloading, distorting and
taking a
> long time to recover. It makes the audio a little raspy, but the
audio band
> pass filter smothes it out so its not as bad as it could be. The problem
> your having might be related to the thump too.
> 72,
> Steve, KD1JV

I'll have to say that troubleshooting this little rig is the most fun I've had since grabbing a handful of volts while working on my Heath SB-101!

Now having dated myself seriously, I have to admit that the world of SMD parts and microprocessors is a brave new one for me. But the principles are the same (well, some of them?). The audio distortion problem I perceived turns out to be a combination of factors. Very strong signals, lousy earbuds and a less-than-optimum alignment job by yours truly all lent their hands to the problem. I went back and re-aligned the passband and found I had set it much too low. Then I tried four different sets of headphones and realized some are far lousier than others.

After dragging my 800 pound scope out of the garage and dusting it off, I took a look at the audio waveform and decided that it does, indeed, distort with very big signals. As Steve pointed out, big sigs do get clipped by the diodes in the T-R circuit, but then they are cleaned up by the crystal filter. But a signal big enough to max out the AGC circuit, even one which is down toward the lower edge of the passband, can look and sound pretty ugly. Mea culpa on this one.

OBTW, long periods of confusion finally cleared up when I realized that the pinout of the AGC chip, U5 on the schematic on page 32 of the manual do not match the pinouts and voltages in the IC Voltage chart on page 23. I admit I didn't search the archives, this has probably been pointed out here before.

As for the click on key-up, I'm still trying to make sense of this. The pictures I see on the scope lead me to believe that everything is working as advertised. When the T-R line goes high at end of the last character sent, the RF envelope decays quickly to zero (about 5 ms), the sidetone drops off at the same time, then about 60 ms later the mute line goes back high, turning the receiver back on. It is at this time that a noticable click happens. The RF envelope is long gone, so I don't believe it's a problem of hearing some of the transmitted

signal before it's totally shut off.

I pulled out my digital camera and am now wasting time trying to take pictures of the scope display. If this melding of old and new tecnologies (solid state camera and hollow-state ancient Tek 7600 series scope) results in anything useful, I'll post the pix here.

Thanks to all those willing to lend a hand,

Cam N6GA

258. Re: [AT_Sprint] Black Dress Progress

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-05 12:27:38 UTC
From: Gil Stacy
Topic: 256 Message: 258
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

259. Rounding 3rd base heading for home plate!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-07 00:22:42 UTC
From: Steve/n0tu
Topic: 259 Message: 259

Woohoo ~ Got all my SMT parts are onboard! Only momentarily lost one resistor which popped out of it's case when I pulled back the tape. It hit me in the nose and bounced into dish of ICs. Good thing I heard it hit the IC dish with a faint "click" or it would have been a goner for sure! I was the only one home at the time and it was dead quiet!

Probably no joy for a while as a busy week is shaping up. But just the through-hole parts, toroids and a module before the electrons find their way around my ATS! Sweeeet!

Steve/n0tu
Monument, CO

260. Re: [NoGaQRP] Black Dress Progress

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-07 21:51:13 UTC
From: JT Croteau
Topic: 260 Message: 260

On 8/7/06, ab4cz@... <ab4cz@...> wrote:
> Tell me a little about the 2200 mAH battery. Does it consist of multiple cells?
> Does it have a safety circuit incorporated in the battery?
> What is are you using for charge control?

It's an 11.1V 2200 mAH Lithium Polymer pack built using 3 cells. The red JST connector is the power connector and the white 4-pin connector is used for balanced charging. These packs are used mostly in R/C model airplanes and I'm using an ESky balanced battery charger that came with a Helicopter that one day crashed and burned like it was hit by a Katyusha rocket.

I found the battery on eBay for $31.00 delivered direct from Hong Kong and I see the same RC Shop is selling the battery charger for about $10 + $12 shipping to the US.

Charger:
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=170014602316

--
JT Croteau - W6FO - Canton, GA
ARS #2,147 | NoGA-QRP | SEDXC | ARRL

261. Re: [AT_Sprint] Re: [NoGaQRP] Black Dress Progress

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-08 03:31:21 UTC
From: w9ya@arrl.net
Topic: 260 Message: 261

Thnxs much for the url info OM....

Unfortunately from that same ebay store I see that battery and others listed as 11.1v 10c 2200 mah including one that is smaller in all three dimensions.

What gives ? i.e. Shouldn't batteries with exactly the same ratings be (essentially) the same size ?

Sorry if this seems like a stupid question, but with other battery chemistries the size vs. capacity rule is basically very un-elastic <- so to speak.

Vy 72;

Bob
w9ya

> On 8/7/06, ab4cz@... <ab4cz@...> wrote:
>> Tell me a little about the 2200 mAH battery. Does it consist of
>> multiple cells? Does it have a safety circuit incorporated in the
>> battery?
>> What is are you using for charge control?
>
> It's an 11.1V 2200 mAH Lithium Polymer pack built using 3 cells. The
> red JST connector is the power connector and the white 4-pin connector
> is used for balanced charging. These packs are used mostly in R/C model
> airplanes and I'm using an ESky balanced battery charger that came with
> a Helicopter that one day crashed and burned like it was hit by a
> Katyusha rocket.
>
> I found the battery on eBay for $31.00 delivered direct from Hong Kong
> and I see the same RC Shop is selling the battery charger for about $10
> + $12 shipping to the US.
>
> Charger:
> http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=170014602316
>
> --
> JT Croteau - W6FO - Canton, GA
> ARS #2,147 | NoGA-QRP | SEDXC | ARRL
>

262. Re: [AT_Sprint] Re: [NoGaQRP] Black Dress Progress

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-08 04:25:45 UTC
From: w9ya@arrl.net
Topic: 260 Message: 262

Hey JT and the gang;

Well I sorta answered my own question.

As it turns out, some of the URLS from this seller are not technically correct. i.e. "They" cut and pasted some odd/incorrect info into some of their sales URL's.

So...no biggie, and it seems like they have some very good prices. The 11.1v - 8c - 1200mah battery is spec.'d to fit inside an altoids case, all for less than 10 bucks. <- This one interests me.

Vy 72;

Bob
w9ya

> Thnxs much for the url info OM....
>
> Unfortunately from that same ebay store I see that battery and others
> listed as 11.1v 10c 2200 mah including one that is smaller in all three
> dimensions.
>
> What gives ? i.e. Shouldn't batteries with exactly the same ratings be
> (essentially) the same size ?
>
> Sorry if this seems like a stupid question, but with other battery
> chemistries the size vs. capacity rule is basically very un-elastic <-
> so to speak.
>
> Vy 72;
>
> Bob
> w9ya
>
>
>
>> On 8/7/06, ab4cz@... <ab4cz@...> wrote:
>>> Tell me a little about the 2200 mAH battery. Does it consist of
>>> multiple cells? Does it have a safety circuit incorporated in the
>>> battery?
>>> What is are you using for charge control?
>>
>> It's an 11.1V 2200 mAH Lithium Polymer pack built using 3 cells. The
>> red JST connector is the power connector and the white 4-pin connector
>> is used for balanced charging. These packs are used mostly in R/C

>> model airplanes and I'm using an ESky balanced battery charger that
>> came with a Helicopter that one day crashed and burned like it was hit
>> by a Katyusha rocket.
>>
>> I found the battery on eBay for $31.00 delivered direct from Hong Kong
>> and I see the same RC Shop is selling the battery charger for about
>> $10 + $12 shipping to the US.
>>
>> Charger:
>> http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=170014602316
>>
>> --
>> JT Croteau - W6FO - Canton, GA
>> ARS #2,147 | NoGA-QRP | SEDXC | ARRL
>>
>
>
>
>
>
>
> Yahoo! Groups Links
>
>
>
>

263. Click Pix

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-08 19:18:52 UTC
From: camqrp
Topic: 263 Message: 263

Gang -

Been chasing my T-R transition click and was able to make a couple of pictures of some pertinent scope traces. I've posted them in the photo album.

In the first photo, the top trace is the Mute line, the lower trace being the audio out. What you see is the sidetone for the duration of one dot, then you see the "click" at the moment the Mute line goes high. It's pretty bodacious here, being quite a bit louder than the sidetone, although for only a few cycles.

The second photo shows the same audio output in the top trace and the RF envelope in the bottom trace. The RF was sampled at the antenna output. You can clearly see that the RF is long gone by the time the audio turns back on. The scope was set for 20 ms/div, who knows how well it's calibrated, but it's ball park enough.

To date I've cleaned off the rosin, re-heated all of the solder joints in any circuit that seems remotely related to the problem, and checked voltages where possible..

The click is worse at higher operating voltage levels. After the initial checkout on a wimpy 9 volt battery, I switched to a 12 v gell cell and that's when I really noticed the click.

Interestingly, the problem is worst on 40 meters. The other bands aren't nearly as bad. De-tuning the receiver input filter also helps quite a bit. I can easily de-tune it slightly on 40 meters and not miss the gain because it breaks my ears drums as it is.

So by running it at a voltage lower than 12 and detuning the front end slightly, the click fades into the background noise. Voila, End of problem.

But as I'm writing this, I think, maybe I'll just pull out L3 and see how bad it is with no RF present...

Cheers,

Cam N6GA

264. Re: [AT_Sprint] Click Pix

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-08 23:45:53 UTC
From: w9ya@arrl.net
Topic: 263 Message: 264

Hey Cam and the gang;

IF I recall correctly...your result pretty much mirror what I perceived, including that 40 meters had the most notable problems.

I am glad you are pursuing this with more vigor than I am...Hi...Hi...

Vy 72;

Bob
w9ya

> Gang -
>
> Been chasing my T-R transition click and was able to make a couple of
> pictures of some pertinent scope traces. I've posted them in the photo
> album.
>
> In the first photo, the top trace is the Mute line, the lower trace
> being the audio out. What you see is the sidetone for the duration of
> one dot, then you see the "click" at the moment the Mute line goes high.
> It's pretty bodacious here, being quite a bit louder than the sidetone,
> although for only a few cycles.
>
> The second photo shows the same audio output in the top trace and the RF
> envelope in the bottom trace. The RF was sampled at the antenna output.
> You can clearly see that the RF is long gone by the time the audio turns
> back on. The scope was set for 20 ms/div, who knows how well it's
> calibrated, but it's ball park enough.
>
> To date I've cleaned off the rosin, re-heated all of the solder joints
> in any circuit that seems remotely related to the problem, and checked
> voltages where possible..
>
> The click is worse at higher operating voltage levels. After the
> initial checkout on a wimpy 9 volt battery, I switched to a 12 v gell
> cell and that's when I really noticed the click.
>
> Interestingly, the problem is worst on 40 meters. The other bands
> aren't nearly as bad. De-tuning the receiver input filter also helps
> quite a bit. I can easily de-tune it slightly on 40 meters and not miss
> the gain because it breaks my ears drums as it is.
>
> So by running it at a voltage lower than 12 and detuning the front end
> slightly, the click fades into the background noise. Voila, End of
> problem.

>
> But as I'm writing this, I think, maybe I'll just pull out L3 and see
> how bad it is with no RF present...
>
> Cheers,
>
> Cam N6GA
>
>
>
>
>
>
> Yahoo! Groups Links
>
>
>
>

265. Re: [AT_Sprint] Click Pix

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-09 00:00:14 UTC
From: Michael Harnage
Topic: 263 Message: 265

Hi all,

I just put my ATS3A on the scope and I see the same thing that Cam is experiencing. Also, put my ATS3 on the scope and don't get the same results. Clean on the ATS3. Hmmmmm. I am running an older version of my firmware ATS3, BUT have a newer not yet released version on the ATS3A. So to eliminate the firmware, I should put the same firmware on each and see if that makes a difference....

I am assuming that Cam is using Steve's firmware as shipped, right Cam?

This is getting interesting... more to follow.

mike/w1mt

--- camqrp <camqrp@...> wrote:

> Gang -
>
> Been chasing my T-R transition click and was able to
> make a couple of
> pictures of some pertinent scope traces. I've posted
> them in the photo
> album.
>

Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

266. Re: [AT_Sprint] Click Pix

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-09 07:04:12 UTC
From: Lutz Bergner
Topic: 263 Message: 266

Hi all,

As some of you may know, I modified my ATS3 with the '3As T/R long Time ago (after Stevens hint). Schematics are in the pictures galery. Except a very rare occasion - often the very first changeover from T -->R I have very smooth response. What I try to say is . It's not this schematic in general that produces clicks. The only difference from '3A to my variant is : I have 10KOhms in the mute- and transmit- line either. Has some of you already examined the control lines? (MPU mute,transmit) in the critical moments?
A stupid question: Is the 50 OHms resistor in place , well contacted and has really 50 OHMs?

72s

Lutz, DL2HRP

Am Dienstag, den 08.08.2006, 17:00 -0700 schrieb Michael Harnage:
> Hi all,
>
> I just put my ATS3A on the scope and I see the same
> thing that Cam is experiencing. Also, put my ATS3 on
> the scope and don't get the same results. Clean on the
> ATS3. Hmmmmm. I am running an older version of my
> firmware ATS3, BUT have a newer not yet released
> version on the ATS3A. So to eliminate the firmware, I
> should put the same firmware on each and see if that
> makes a difference....
>
> I am assuming that Cam is using Steve's firmware as
> shipped, right Cam?
>
> This is getting interesting... more to follow.
>
> mike/w1mt

267. Re: [AT_Sprint] Click Pix

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-09 14:40:54 UTC
From: Michael Harnage
Topic: 263 Message: 267

Hi all,

Last night I checked the firmware and that is not the problem. It is strictly an ATS3A unmute experience. Most prevalent with 40m filter but present with all filters. Not happens uniquely on unmute, so just listening to the frequency will cause the same thing. At the end of the freq announcement there is the click.

As I was lying in bed trying to sleep I realized that the 2 2n7002 FET's was another difference between the ATS3 and ATS3A.

I am thinking that it may help to have a limiting resistor and bypass cap feeding the gate of at least the mute FET just like Lutz's design. I double checked R20 -- it is fine (52 ohms on a cheap meter, good for me).

Anybody wanna confirm before I start cutting up my rig? Am I barking up the wrong tree?

-mike/w1mt

--- Lutz Bergner <l.bergner@...> wrote:

> Hi all,
>
> As some of you may know, I modified my ATS3 with the
> '3As T/R long Time
> ago (after Stevens hint). Schematics are in the
> pictures galery. Except
> a very rare occasion - often the very first
> changeover from T -->R I
> have very smooth response. What I try to say is .
> It's not this
> schematic in general that produces clicks. The only
> difference from '3A
> to my variant is : I have 10KOhms in the mute- and
> transmit- line
> either. Has some of you already examined the control
> lines? (MPU
> mute,transmit) in the critical moments?
> A stupid question: Is the 50 OHms resistor in place
> , well contacted
> and has really 50 OHMs?

>

Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

268. Re: Click Pix

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-09 15:15:51 UTC
From: Dave
Topic: 263 Message: 268

According to my scope, the click is present in a big way at the output
of the first audio stage, U3 pin 1. (I'm seeing the same click
everyone else is seeing.)

Dave

269. Re: [AT_Sprint] Re: Click Pix

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-09 15:37:35 UTC
From: Michael Harnage
Topic: 263 Message: 269

Don't have a scope here at work but wonder if you can
see the click at the output of U2 (mixer)?

Here is another thought: Perhaps the mute line is
being coupled to the audio chain somehow due to
routing?

-mike/w1mt

--- Dave <dmertz@...> wrote:

> According to my scope, the click is present in a big
> way at the output
> of the first audio stage, U3 pin 1. (I'm seeing the
> same click
> everyone else is seeing.)
>

_____
Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

270. Re: [AT_Sprint] Re: Click Pix

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-09 16:02:58 UTC
From: Archie Lamb
Topic: 263 Message: 270

Two points:
o The infamous click is present on several "QRP" rigs in a similar manner. I believe Steve even comments about that somewhere on his site. My SW-40 hurts my ears with headphones on.
o The click (as described in this train) is NOT present (barely discernible) in the ATS-3A I built. I would assume therefore that it is either a 'build up of tolerances' or some of us are just 'lucky' (not likely).

These comments are not meant to discourage further searching, but to suggest that a solution may require a 'creative solution' to be applied at the trouble source. Perhaps one that would be useful in other QRP rigs as well.

Archie (KX5X)

271. Re: Click Pix

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-09 17:39:31 UTC
From: Dave
Topic: 263 Message: 271

--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:
>
> Don't have a scope here at work but wonder if you can
> see the click at the output of U2 (mixer)?

I think I see it on the outputs (pins 4 and 5) of U2 as well, but,of course, at a lower level.

There is very little click on 80, 30 and 20M, but it's somewhat pronounced on 40M (L1F, L2F and C3F have altered values on my 40M module, but I don't think that's a factor).

Dave, WA3OFF

272. Re: [AT_Sprint] ATS-3A thump

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-09 18:22:48 UTC
From: Steven Weber
Topic: 246 Message: 272

Very strange. There is definately a little burst of noise being generated after the mute switch goes high. It seems to be generated by the BFO mixer. I removed the coupling caps to the first audio amp and it goes away. Putting those back and disconnecting the input to the BFO mixer it comes back. I can not seem to figure out what the mixer is doing to produce the little glitch.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

273. Re: ATS-3A thump

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-09 21:11:12 UTC
From: Dave
Topic: 246 Message: 273

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
> I removed the coupling caps to the first audio amp and it goes away.
> Putting those back and disconnecting the input to the BFO mixer it
> comes back.

Something outside the BFO mixer area may contribute. If I simply yank out the 40M module (while the rig is powered), the thump pretty much goes away.

Perhaps Mike was on the right track when he mentioned that Q2 (controlled by the MUTE signal) is a new addition with the '3A. The band modules are a bit different as well.

Dave, WA3OFF

274. Re: ATS-3A thump

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-11 18:49:40 UTC
From: w1mt
Topic: 246 Message: 274

Cam suggested to me that a 0.1uF from mute to ground helps (C57 would have been a great place to put it -- thanks Cam). It does help -- a lot. BUT as Dave suggested to me this interferes with programming the mpu from the jtag port. So it is NOT a permanent solution. Still wondering if a resistor in the mute line with a bypass cap on the Q2 side might help and still allow programming? I could put a sip socket at the programming point and have the bypass cap be removable for programming. This might just be what I do if no other solution is found.

Even with the bypass cap in place there is still a small click. Probably not annoying with a real antenna attached but there none the less.

I have been pouring over the datasheets trying to figure out why and am pretty much stumped.

One thought I had: The LO on 40M is almost exactly half of the IF so I thought that might have something to do with it so I put the LO on the low side for 40M (just like 80M) and it is still there and most prevalent on 40M. Have visually inspected the 40m board and nothing jumps out at me. Why does removing the board have the same affect as the bypass cap? This is a perplexing issue......

Another thought I had: while the FET ramps up there may be a time where the rf input causes the FET to "flicker" but what we are seeing is longer than that should be so I don't think that is it.

Very strange indeed.

Anyone else having any luck?

-mike/wm1t

275. Audio without Joy!?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-12 02:48:46 UTC
From: Steve/n0tu
Topic: 275 Message: 275

Powered up my ATS tonight and got what seems to be audio? I can hear a slight thump when I connect the power plug then a low hiss like the audio chain is working. But I don't hear the MPU ID? here's what I measured on the MPU and DDS

U6 MPU (volts measured)

P1 0V TEST (0) P20 3.5V MUTE (200mV)<<<
P2 3.5V V+ (3.49V) P19 3.5V DDS (.4V)<<<
P3 0V ST out (0V) P18 3.5V DDS (.4V)<<<
P4 0V GND (0V) P17 0V DDS (0V)
P5 2.7V osc (.6 V)<<< P16 0V Tx key (0V)
P6 1.7V osc (.5 V)<<< P15 3.5V Tunedn (3.49V)
P7 3.5V reset (3.5V) P14 3.5V MENU (3.49V)
P8 3.5V Dash in (3.5V) P13 3.5V band (3.49V)
P9 3.5V Dot in (3.5V) P12 3.5V band (3.49V)
P10 3.5V Tune up (0V)<<< P11 3.5V RIT (3.49V)

U7 AD9834 DDS (volts measured)

P1 1.13V FS ADJ (1.13V) P20 .75V IOUTB (.5V)
P2 1.17V REF out (1.18V) P19 .37V IOUT (.5V)
P3 3.54V COMP (3.60V) P18 0V AGND (0V)
P4 5.0V AVDD (5.0V) P17 .37V CMPin (.5V)
P5 3.5V DVDD (3.5V) P16 3.75V CMPout (4.4V)
P6 2.4V CAP (2.4V) P15 3.3V FSYNC (200mV)
P7 0V DGND (0V) P14 3.3V SCLK (200mV)
P8 1.7V 40 MHz (1.7V) P13 0V SDATA (200mV)
P9 0V Fsel (0V) P12 0V SLEEP (0V)
P10 0V Psel (0V) P11 0V RESET (0V)

Any clues? Steve/n0tu

276. Re: [AT_Sprint] Audio without Joy!?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-12 03:22:51 UTC
From: John A. Evans - N0HJ
Topic: 275 Message: 276

I've been working with Steve on this, so I've had a little time to look at the data and symptoms. I suspect he needs a new crystal for the CPU - the CPU needs to work before he can get a sidetone and really drive the DDS. The tune up input is whacko but that may be a symptom of the CPU not running properly. He has checked the solder connections of the crystal to the board and the associated input pins to the CPU.

Hope this helps the 'real' experts ;)

72 - john - n0hj

Steve/n0tu wrote:
Powered up my ATS tonight and got what seems to be audio? I can hear
>
> a slight thump when I connect the power plug then a low hiss like the
> audio chain is working. But I don't hear the MPU ID? here's what I
> measured on the MPU and DDS
>
> ....
>
> Any clues? Steve/n0tu
>

277. Re: ATS-3A thump

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-12 16:06:50 UTC
From: Dave
Topic: 246 Message: 277

I desoldered Q2 and reinstalled it with a 10K resistor in series with the gate and a 0.01uF capacitor from the gate to ground. The thump is absolutely gone and JTAG programming is unaffected. (other than to also quiet the audio noise generated by TDO's toggling of the MUTE signal).

Watching the drain of Q2, it seems that there might be a charge that remains on C59 or C47 after the Tx shuts off and a fast switch of Q2 shunts it into the Rx with a thump. I'm not sure why 40M is most affected; perhaps some part of the Rx circuit just happens to ring at about 7 MHZ when thumped by that charge.

If someone else wants to try this, it might be worth checking that the change hasn't upset the normal operation of the QSK function. (I think it's fine though.)

Dave, WA3OFF

278. Re: Audio without Joy!?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-12 16:19:49 UTC
From: Dave
Topic: 275 Message: 278

> I suspect he needs a new crystal for the CPU

I agree that it seems that the processor's crystal circuit is not oscillating. Check for a shorts or opens on all of the processor's pins, particularly pins 5 and 6. That seems more likely than a bad crystal.

Dave, WA3OFF

279. Altoids, Mtg the PCB, and Labels

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-13 12:50:45 UTC
From: Terry WA0ITP
Topic: 279 Message: 279

I posted this on QRP-L and thought I'd post it here also, in case some of the members here dont subscribe there..

Installing the 3/3A board in an Altoids can be a little testy, but easy enough if the mounting standoffs are glued in place. Don't be put off by the thought of it, check it out (link below). It's easy to do and works well for Rock Mites and and other projects too.

I'm still providing labels for the 3 or 3A. They're all over the USA, and some in Europe also. Please drop me a note if you're interested, they're free.

Details on both are here. http://www.wa0dx.org/wa0itp/ats3.html

72 73
Terry, WA0ITP
www.wa0dx.org/wa0itp

280. Re: [AT_Sprint] Audio without Joy!?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-13 12:58:25 UTC
From: Michael Harnage
Topic: 275 Message: 280

That thump tells me that the MPU is working (it's the
mute line going high), which means the crystal is
good.

I would check from the MPU to the sidetone switch (U4
I think). Then is that is OK start checking the audio
chain. Do you hear noise from a noise generator? or a
signal source?

-mike/w1mt

--- Steve/n0tu <n0tu.qrp@...> wrote:

> Powered up my ATS tonight and got what seems to be
> audio? I can hear
> a slight thump when I connect the power plug then a
> low hiss like the
> audio chain is working. But I don't hear the MPU ID?

Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

281. Re: [AT_Sprint] Audio without Joy!?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-13 15:50:03 UTC
From: John A. Evans - N0HJ
Topic: 275 Message: 281

Hi Mike,

I'll have to check with Steve, but I am not sure if the thump heard is immediately after the power is applied (my ats and ats-3 do this) or is a few seconds late which would signal the completion of initialization and the startup message. If it comes a bit after power is applied, then yes, it sounds like the MPU is working. From his earlier readings, it seemed that mute was always low though.

john

Michael Harnage wrote:
>
> That thump tells me that the MPU is working (it's the
> mute line going high), which means the crystal is
> good.
>
> I would check from the MPU to the sidetone switch (U4
> I think). Then is that is OK start checking the audio
> chain. Do you hear noise from a noise generator? or a
> signal source?
>
> -mike/w1mt
>
> --- Steve/n0tu <n0tu.qrp@... <mailto:n0tu.qrp%40gmail.com>> wrote:
>
> > Powered up my ATS tonight and got what seems to be
> > audio? I can hear
> > a slight thump when I connect the power plug then a
> > low hiss like the
> > audio chain is working. But I don't hear the MPU ID?
>

282. No joy continues!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-13 18:28:23 UTC
From: Steve/n0tu
Topic: 282 Message: 282

Got more audio but no sidetone or ID yet?

UPDATE: I lost the thump on power up and now I get a
definitive 'click' but double the amount of hiss it's alot louder -I
also get lots more audio (AC hum etc.) if I touch a screwdriver to
the xtal filter now So I 'think' I fixed U4 the mute switch by
remounting it. Control P6 is lower than it should be?

U4 MUTE SWITCH
P1 2.2V Audio in (2.16v)
P6 3.5V Control (1.5V)
P2 0V GND (0)
P5 5V V+ (4.9)
P3 0V ST in (0)
P4 2.2V Audio out (2.2v)

Still no CPU ID or sidetone - reheated R12,C20/21 -no result?

Xtal voltages looks better now(below)

P18,19 and 20 look weird?

NEWS VOLTAGE READINGS:
-----------------U6 MPU-----(measured)----------------
P1 0V TEST (0) P20 3.5V MUTE (1.5V) <<<<
P2 3.5V V+ (3.5V) P19 3.5V DDS (.8V)
P3 0V ST out (0V) P18 3.5V DDS (.6V)
P4 0V GND (0V) P17 0V DDS (.3V)
P5 2.7V osc (2.8 V) P16 0V Tx key (.2V)
P6 1.7V osc (2.0 V) P15 3.5V Tunedn (3.49V)
P7 3.5V reset (3.5) P14 3.5V MENU (3.49V)
P8 3.5V Dash in (3.5V) P13 3.5V band (3.49V)
P9 3.5V Dot in (3.5V) P12 3.5V band (3.49V)
P10 3.5V Tune up (3.5V) P11 3.5V RIT (3.49V)

Any thoughts. Grasshopper is ready?

Steve/n0tu

283. Re: [AT_Sprint] No joy continues!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-13 19:05:59 UTC
From: Karl Larsen
Topic: 282 Message: 283

It appears you found U4 was bad and I bet some of the other tiny 4
and 6 pin chips might be in wrong or not soldered. I suggest you just
check each of those tiny chips. I put them in wrong too.

73 Karl K5DI

Steve/n0tu wrote:
> Got more audio but no sidetone or ID yet?
>
> UPDATE: I lost the thump on power up and now I get a
> definitive 'click' but double the amount of hiss it's alot louder -I
> also get lots more audio (AC hum etc.) if I touch a screwdriver to
> the xtal filter now So I 'think' I fixed U4 the mute switch by
> remounting it. Control P6 is lower than it should be?
>
> U4 MUTE SWITCH
> P1 2.2V Audio in (2.16v)
> P6 3.5V Control (1.5V)
> P2 0V GND (0)
> P5 5V V+ (4.9)
> P3 0V ST in (0)
> P4 2.2V Audio out (2.2v)
>
>
> Still no CPU ID or sidetone - reheated R12,C20/21 -no result?
>
> Xtal voltages looks better now(below)
>
> P18,19 and 20 look weird?
>
> NEWS VOLTAGE READINGS:
> -----------------U6 MPU-----(measured)----------------
> P1 0V TEST (0) P20 3.5V MUTE (1.5V) <<<<
> P2 3.5V V+ (3.5V) P19 3.5V DDS (.8V)
> P3 0V ST out (0V) P18 3.5V DDS (.6V)
> P4 0V GND (0V) P17 0V DDS (.3V)
> P5 2.7V osc (2.8 V) P16 0V Tx key (.2V)
> P6 1.7V osc (2.0 V) P15 3.5V Tunedn (3.49V)
> P7 3.5V reset (3.5) P14 3.5V MENU (3.49V)
> P8 3.5V Dash in (3.5V) P13 3.5V band (3.49V)
> P9 3.5V Dot in (3.5V) P12 3.5V band (3.49V)
> P10 3.5V Tune up (3.5V) P11 3.5V RIT (3.49V)
>
> Any thoughts. Grasshopper is ready?
>

> Steve/n0tu
>
>
>
>
>
>
> Yahoo! Groups Links
>
>
>
>
>
>
>
>
>

284. Re: [AT_Sprint] No joy continues!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-13 19:17:52 UTC
From: w9ya@arrl.net
Topic: 282 Message: 284

Hey Steve;

Um,...what did you do to get this far ?

Vy 72;

Bob
w9ya

> Got more audio but no sidetone or ID yet?
>
> UPDATE: I lost the thump on power up and now I get a
> definitive 'click' but double the amount of hiss it's alot louder -I
> also get lots more audio (AC hum etc.) if I touch a screwdriver to the
> xtal filter now So I 'think' I fixed U4 the mute switch by
> remounting it. Control P6 is lower than it should be?
>
> U4 MUTE SWITCH
> P1 2.2V Audio in (2.16v)
> P6 3.5V Control (1.5V)
> P2 0V GND (0)
> P5 5V V+ (4.9)
> P3 0V ST in (0)
> P4 2.2V Audio out (2.2v)
>
>
> Still no CPU ID or sidetone - reheated R12,C20/21 -no result?
>
> Xtal voltages looks better now(below)
>
> P18,19 and 20 look weird?
>
> NEWS VOLTAGE READINGS:
> -----------------U6 MPU-----(measured)----------------
> P1 0V TEST (0) P20 3.5V MUTE (1.5V) <<<<
> P2 3.5V V+ (3.5V) P19 3.5V DDS (.8V)
> P3 0V ST out (0V) P18 3.5V DDS (.6V)
> P4 0V GND (0V) P17 0V DDS (.3V)
> P5 2.7V osc (2.8 V) P16 0V Tx key (.2V)
> P6 1.7V osc (2.0 V) P15 3.5V Tunedn (3.49V)
> P7 3.5V reset (3.5) P14 3.5V MENU (3.49V)
> P8 3.5V Dash in (3.5V) P13 3.5V band (3.49V)
> P9 3.5V Dot in (3.5V) P12 3.5V band (3.49V)
> P10 3.5V Tune up (3.5V) P11 3.5V RIT (3.49V)
>
> Any thoughts. Grasshopper is ready?

>
> Steve/n0tu

285. Re: [AT_Sprint] No joy continues!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-13 22:04:04 UTC
From: Michael Harnage
Topic: 282 Message: 285

Pin 16 and 17 don't look quite right either.

Do you hear any audio increase when connected to a
noise generator?

Do you hear any signals? (Nearby transmitter connected
to a dummy load).

If you click the menu button to you hear an audio
click after a few seconds? Monitoring the mute (pin
20) does it change during this procedure?

Connect a dummy load, then hold the dit or dah switch
down do you hear anything in a nearby receiver?

Several things could be happening here: MPU crystal
not working, MPU not working, DDS not working, Q2 not
working, who knows what else. I am not convinved that
the crystal is bad, yet.

-mike/w1mt

--- Steve/n0tu <n0tu.qrp@...> wrote:

> Got more audio but no sidetone or ID yet?
>
> UPDATE: I lost the thump on power up and now I get a
>
> definitive 'click' but double the amount of hiss
> it's alot louder -I
> also get lots more audio (AC hum etc.) if I touch a
> screwdriver to
> the xtal filter now So I 'think' I fixed U4 the mute
> switch by
> remounting it. Control P6 is lower than it should
> be?
>
> U4 MUTE SWITCH
> P1 2.2V Audio in (2.16v)
> P6 3.5V Control (1.5V)
> P2 0V GND (0)
> P5 5V V+ (4.9)
> P3 0V ST in (0)
> P4 2.2V Audio out (2.2v)
>
>
> Still no CPU ID or sidetone - reheated R12,C20/21

> -no result?
>
> Xtal voltages looks better now(below)
>
> P18,19 and 20 look weird?
>
> NEWS VOLTAGE READINGS:
> -----------------U6
> MPU-----(measured)----------------
> P1 0V TEST (0) P20 3.5V MUTE (1.5V)
> <<<<
> P2 3.5V V+ (3.5V) P19 3.5V DDS (.8V)
> P3 0V ST out (0V) P18 3.5V DDS (.6V)
> P4 0V GND (0V) P17 0V DDS (.3V)
> P5 2.7V osc (2.8 V) P16 0V Tx key (.2V)
> P6 1.7V osc (2.0 V) P15 3.5V Tunedn (3.49V)
> P7 3.5V reset (3.5) P14 3.5V MENU (3.49V)
> P8 3.5V Dash in (3.5V) P13 3.5V band (3.49V)
> P9 3.5V Dot in (3.5V) P12 3.5V band (3.49V)
> P10 3.5V Tune up (3.5V) P11 3.5V RIT (3.49V)
>
> Any thoughts. Grasshopper is ready?
>
> Steve/n0tu
>
>
>
>
>
>
> Yahoo! Groups Links
>
>
> AT_Sprint-unsubscribe@yahoogroups.com
>
>
>
>
>

Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

286. Re: ATS-3A thump

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-13 22:41:07 UTC
From: camqrp
Topic: 246 Message: 286

Dave -

Sounds like a good fix!

Question - how did you do it, physically? Looking at the board, that's one of the tightest spots, Q2 nestled right up close to the band module socket.

I was thinking I might do it on the bottom side by cutting the Mute line just before it passes through the via on the way to the gate of U2 and inserting the resistor there.

Thanks,

Cam N6GA

--- In AT_Sprint@yahoogroups.com, "Dave" <dmertz@...> wrote:
>
> I desoldered Q2 and reinstalled it with a 10K resistor in series with
> the gate and a 0.01uF capacitor from the gate to ground. The thump is
> absolutely gone and JTAG programming is unaffected.

287. Re: [AT_Sprint] Re: ATS-3A thump

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-14 00:21:46 UTC
From: Michael Harnage
Topic: 246 Message: 287

I just did this mod on the bottom of the board. Not much room there either. :) I hope to get pictures up tomorrow morning.

I still have a click (audible and it shows up on teh scope). It is much less than before, but I don't think it is any less than the 0.1uf direct bypass discussed before. At least this way I can still program the rig and leave the resistor and cap permantly in place.

Dave can you see a small click on the scope with your mod?

-mike/w1mt

--- camqrp <camqrp@...> wrote:

> Dave -
>
> Sounds like a good fix!
>
> Question - how did you do it, physically? Looking at
> the board, that's
> one of the tightest spots, Q2 nestled right up close
> to the band
> module socket.
>
> I was thinking I might do it on the bottom side by
> cutting the Mute
> line just before it passes through the via on the
> way to the gate of
> U2 and inserting the resistor there.
>
> Thanks,
>
> Cam N6GA
>
>
>
> --- In AT_Sprint@yahoogroups.com, "Dave"
> <dmertz@...> wrote:
> >
> > I desoldered Q2 and reinstalled it with a 10K
> resistor in series with
> > the gate and a 0.01uF capacitor from the gate to
> ground. The thump is

> > absolutely gone and JTAG programming is
> unaffected.
>
>
>
>
>
>
>
> Yahoo! Groups Links
>
>
> AT_Sprint-unsubscribe@yahoogroups.com
>
>
>
>
>

Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

288. Re: [AT_Sprint] No joy continues!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-14 01:43:20 UTC
From: qrq_cw
Topic: 282 Message: 288

--- Steve/n0tu <n0tu.qrp@...> wrote:

> Got more audio but no sidetone or ID yet?

This saga is hard to watch. Do you have access to an oscilloscope? You could narrow these problems down in a matter of a few minutes with the right test equipment. Static voltages only tell so much of the story. At the freq's used in the ATS3, any old scope would be fast enough.

Mark K5LXP
Albuquerque, NM

289. Scope troubleshooting hints/tips?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-14 12:34:11 UTC
From: Steve/n0tu
Topic: 289 Message: 289

First off let me say I'm grateful for any and all help w/my ATS! As mentioned it's probably time to move on to a scope. On that note any hints or tips on what I'll see or where to begin looking?

Thanks, Steve/n0tu

290. Re: [AT_Sprint] Scope troubleshooting hints/tips?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-14 13:23:19 UTC
From: w9ya@arrl.net
Topic: 289 Message: 290

Hey Steve;

The scope allows you to see signals as they propagate through stages. You can also see loading effects, open traces, shorts, etc., *and* see how the power applied 'to a stage (dc for instance) is being (or not being) used.

So....at the most basic level you can see if your oscillator is running, mixers working, dc getting from one place to another to run things, and if the various switches (like the mute switch) are working correctly.

I would start with the various RF signals being generated in the radio. I would also make sure dc was getting everywhere it is required.

Good luck.

es

Vy 72;

Bob
w9ya

> First off let me say I'm grateful for any and all help w/my ATS! As
> mentioned it's probably time to move on to a scope. On that note any
> hints or tips on what I'll see or where to begin looking?
>
> Thanks, Steve/n0tu
>
>
>
>
>
>
>
> Yahoo! Groups Links
>
>
>
>

291. Re: Scope troubleshooting hints/tips?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-14 13:44:20 UTC
From: qrq_cw
Topic: 289 Message: 291

--- Steve/n0tu <n0tu.qrp@...> wrote:

> it's probably time to move on to a scope. On that note any
> hints or tips on what I'll see or where to begin looking?

You'll know it when you see it, HI. For instance, the clock
will be immediately obvious- it will be there or it won't.
You will see gain through amplfiers, and be able to follow
the output from the DDS through the buffers, PA and filters.
You can 'see' audio and adjust the tweakers for the correct
response. It's even useful for checking DC signals, from
checking absolute levels to seeing if there are any irregularities,
and for checking logic transitions. Checking the P-P voltage
across a dummy load you can measure output power. I can't imagine
working on a radio without one.

292. Re: ATS-3A thump

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-14 15:34:30 UTC
From: w1mt
Topic: 246 Message: 292

Pics of my version of this mod now posted in my photo folder on the
AT_Sprint group site. Look at the area below L3 for the resistor and
to the right of the resistor for the cap.

Anyone else checked out this mod on a scope?

-mike/w1mt

--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:
> I hope to get pictures up
> tomorrow morning.
>

293. Re: No joy continues!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-14 16:42:58 UTC
From: Dave
Topic: 282 Message: 293

> Xtal voltages looks better now(below)
>
> P18,19 and 20 look weird?
>
> NEWS VOLTAGE READINGS:
> -----------------U6 MPU-----(measured)----------------
> P1 0V TEST (0) P20 3.5V MUTE (1.5V) <<<<
> P2 3.5V V+ (3.5V) P19 3.5V DDS (.8V)
> P3 0V ST out (0V) P18 3.5V DDS (.6V)
> P4 0V GND (0V) P17 0V DDS (.3V)
> P5 2.7V osc (2.8 V) P16 0V Tx key (.2V)
> P6 1.7V osc (2.0 V) P15 3.5V Tunedn (3.49V)
> P7 3.5V reset (3.5) P14 3.5V MENU (3.49V)
> P8 3.5V Dash in (3.5V) P13 3.5V band (3.49V)
> P9 3.5V Dot in (3.5V) P12 3.5V band (3.49V)
> P10 3.5V Tune up (3.5V) P11 3.5V RIT (3.49V)

I agree. It seems that the crystal is now oscillating, so the MPU is probably running now.

1.5 volts on pin 20 (a logic level) suggests a short that is dragging down the MPU's output on this pin and messing up the operation of U4 (or else U4 is backwards or now bad for some reason). You'll want to look at the first audio amp and the sidetone with the scope.

Careful when probing the AGC chip, U5. As mentioned here before, the pin numbering for that chip on the schematic is not correct; use the chip's datasheet.

Pins 18 and 19 go to the DDS chip for it's control programming. I would guess that the DDS chip is not getting programmed to generate the LO.

I think that once you resolve the Pin 20 problem you will hear the ID. You'll need to resolve the pin 18 and 19 problems before you will get the DDS chip to work.

Dave, WA3OFF

294. Re: ATS-3A thump

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-14 16:59:29 UTC
From: Dave
Topic: 246 Message: 294

> I still have a click (audible and it shows up on teh
> scope). It is much less than before, but I don't think
> it is any less than the 0.1uf direct bypass discussed
> before. At least this way I can still program the rig
> and leave the resistor and cap permantly in place.
>
> Dave can you see a small click on the scope with your
> mod?

I've been probing the audio at C18. I no longer see anything there when MUTE goes high, although I do see a bit there immediately prior to that (that shouldn't be getting past U4).

I think the remaining click might be from the switching of U4. It's the same with all band modules (and no band module). I'll bet that at this point the operation looks the same as it does on the ATS-3.

I was going to suggest a slightly different way of doing the mod. I probably would have installed the 0.01uF at C57, cut the two tracks on the bottom of the board going to JTAG pin 7, put the 10K across the cut from JTAG pin 7 to C57 and jumper the junction of C57 and the 10K to the cut track going to Q2's gate. Your way eliminates one of my cuts and the jumper at the expense of a bit more scraping of the solder mask (and I only have 1206 SMT parts in stock, making it tougher to fit the 10K where you did).

Dave, WA3OFF

295. Re: ATS-3A thump

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-14 19:49:03 UTC
From: camqrp
Topic: 246 Message: 295

> Anyone else checked out this mod on a scope?
>
> -mike/w1mt
>

I just made the mod and I got the same results you did, Mike. The same residual click, very small. At the audio output it's measuring 20 mV P-P, which is quite a bit less than the sidetone.

I put in the resistor first, then checked to see what it sounded like. I got the results as described above. I then added the cap, clip-lead style and there was no discernable change. So I have left off the .01 cap for now.

- Cam N6GA

296. Re: [AT_Sprint] Re: ATS-3A thump

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-14 20:03:57 UTC
From: Terry WA0ITP
Topic: 246 Message: 296

I have the 3, not the 3A, so I dont have the schematic in front of me. But, if the click/thump can be eliminated in the audio section (where is Q2 anyway?) Then the gate circuit of Q7 in Steve's AP-80 might be worth considering. I swiped it while making a separate receiver and transmitter transceive. Worked really well.. http://kd1jv.qrpradio.com/ap80/AP80.HTM Sri if I'm way off base here.

72 73
Terry, WA0ITP
www.wa0dx.org/wa0itp

----- Original Message -----
From: camqrp
To: AT_Sprint@yahoogroups.com
Sent: Monday, August 14, 2006 2:49 PM
Subject: [AT_Sprint] Re: ATS-3A thump

> Anyone else checked out this mod on a scope?
>
> -mike/w1mt
>

I just made the mod and I got the same results you did, Mike. The same residual click, very small. At the audio output it's measuring 20 mV P-P, which is quite a bit less than the sidetone.

I put in the resistor first, then checked to see what it sounded like. I got the results as described above. I then added the cap, clip-lead style and there was no discernable change. So I have left off the .01 cap for now.

- Cam N6GA

No virus found in this incoming message.
Checked by AVG Free Edition.
Version: 7.1.405 / Virus Database: 268.10.9/417 - Release Date: 8/11/2006

297. ATS-3A antenna problem

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-15 02:04:03 UTC
From: Glenn Maclean
Topic: 297 Message: 297

I wrote to the group a bit ago about not hearing any signals on my recently built ATS-3A. I found out I had a short in my antenna system. I am using a Carolina Windom that is about 8 years old. I am on vacation this week with not big plans to go anywhere just catching up on projects and doing some day trips.

I finally was able to get outside today to see where my short was. I laughed my head off when I finally found the problem. At first I thought squirrels had gotten to my feed line this turned out to be not true.

We have a Gordon Setter 6 month old female puppy. She sleeps in the back yard against the back of the house. It turns out she has been very busy and chewed my RG8-X feed line in two where it enters through a house vent and goes to my basement where the shack is. No wonder I could not hear any signals!!!!!!!

I am still laughing.

Glenn WA7SPY

298. Re: [AT_Sprint] Re: ATS-3A thump

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-15 09:18:15 UTC
From: Lutz Bergner
Topic: 246 Message: 298

IMHO too high values of capacitors should be avoided in this place
especially in conjunction with no or too low series resistors. 1nF is
sufficient to short all garbage there and a 10K R should do.
BTW: I 've accidently put a 200KOhms 0805 resistor into the mute line
having noticed no disadvantages at all. (Have realized it much later).
72s

Lutz,DL2HRP

Am Montag, den 14.08.2006, 15:03 -0500 schrieb Terry WA0ITP:
> I have the 3, not the 3A, so I dont have the schematic in front of
> me. But, if the click/thump can be eliminated in the audio section
> (where is Q2 anyway?) Then the gate circuit of Q7 in Steve's AP-80
> might be worth considering. I swiped it while making a separate
> receiver and transmitter transceive. Worked really well..
> http://kd1jv.qrpradio.com/ap80/AP80.HTM Sri if I'm way off base here.
>
> 72 73
> Terry, WA0ITP
> www.wa0dx.org/wa0itp
>
>
>
> ----- Original Message -----
> From: camqrp
> To: AT_Sprint@yahoogroups.com
> Sent: Monday, August 14, 2006 2:49 PM
> Subject: [AT_Sprint] Re: ATS-3A thump
>
>
>
> > Anyone else checked out this mod on a scope?
> >
> > -mike/w1mt
> >
>
> I just made the mod and I got the same results you did, Mike.
> The same
> residual click, very small. At the audio output it's measuring
> 20 mV
> P-P, which is quite a bit less than the sidetone.
>
> I put in the resistor first, then checked to see what it
> sounded like.
> I got the results as described above. I then added the cap,

> clip-lead
> style and there was no discernable change. So I have left off
> the .01
> cap for now.
>
> - Cam N6GA
>
>
>
>
>
> ---
>
> No virus found in this incoming message.
> Checked by AVG Free Edition.
> Version: 7.1.405 / Virus Database: 268.10.9/417 - Release
> Date: 8/11/2006
>
>
>
--
iXadmin

---
* Systemadministration
* Netzwerkberatung
* Internetdienstleistungen

Tel.: 034922 66717
Fax.: 034922 66718
mobil: 0175 2631032
VOIP(sipgate): 01801 6666260511
Mail: l.bergner@...

299. Re: ATS-3A thump

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-15 13:18:00 UTC
From: Dave
Topic: 246 Message: 299

> IMHO too high values of capacitors should be avoided in this place
> especially in conjunction with no or too low series resistors. 1nF
> is sufficient to short all garbage there and a 10K R should do.

Depending on whose datasheet you look at, the 2N7002 has about a
20 to 50pF gate capacitance and this is apparently sufficient when
combined with just the 10K series resistor. It seems to me that
any additional capacitance would just further delay and soften the
switching of Q2. The important thing is that the delay is short
enough that Q2 is fully switched off before the PA is activated.

I guess I lied when I said the thump was "absolutely" gone. What
remains is a slight click. At C18 it's nothing like what was there
before. However, U5, the AGC chip, does seem to amplify this click
to a significant level.

As far as I can tell, the source of this click is the 5V power.
I can't see it at all on the input to the first mixer, but the
click is present at its output. A click of about the same
amplitude is present on 5V.

Dave

300. Re: [AT_Sprint] Re: ATS-3A thump

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-15 19:41:41 UTC
From: Steven Weber
Topic: 246 Message: 300

What seems to have eliminated the mute release click for me was changing C54 to 100 ufd. You can tack a 100 ufd cap across the existing C54 and lay it down over the regulator.

Somehow I blow out Q2 playing that area, so I'd try the 100 ufd fix before anything else. Also, removing L3 and the coupling cap from the LPF to Q2 didn't affect my click any, so I don't think its coming from there. A little bounce in the 5V regulator is more likely.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

301. Re: ATS-3A thump

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-16 02:24:40 UTC
From: nm8h_ars
Topic: 246 Message: 301

Shouldn't there be a capacitor from pin 8 of U3 to ground?
Dave NM8H

302. Re: ATS-3A thump

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-16 02:38:37 UTC
From: Dave
Topic: 246 Message: 302

> You can tack a 100 ufd cap across the existing C54 and lay
> it down over the regulator.

Yup, that eliminated the remaining click on MUTE release for me.
On the downside, the 100uF 16V cap that I used added almost 0.7% to
my station weight, so I'll be replacing it and C54 with a smaller
100uF.

Dave

303. U5 pin out?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-16 02:40:35 UTC
From: Steve/n0tu
Topic: 303 Message: 303

Looking for the correct voltages and pin out for U5.

>Careful when probing the AGC chip, U5. As mentioned here before, the
>pin numbering for that chip on the schematic is not correct; use the
>chip's datasheet.

Where can I find the chip's datasheet? I searched the web for info
on "AM6123MST Panasonic" only hit I get is the AST3 manual? Or better
yet does someoone have info for U5?

Steve/n0tu

304. Re: U5 pin out?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-16 03:43:27 UTC
From: Dave
Topic: 303 Message: 304

> Looking for the correct voltages and pin out for U5.

http://industrial.panasonic.com/www-data/pdf2/AFC7000/AFC7000CE3.pdf

Dave, WA3OFF

305. Re: U5 pin out?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-16 04:27:02 UTC
From: camqrp
Topic: 303 Message: 305

As mentioned here before, the
> >pin numbering for that chip on the schematic is not correct; use the
> >chip's datasheet.
>
> Where can I find the chip's datasheet? I searched the web for info
> on "AM6123MST Panasonic" only hit I get is the AST3 manual? Or better
> yet does someoone have info for U5?
>
> Steve/n0tu
>

Steve -

The pinouts and voltages on page 23, the IC voltage charts, are
correct. It's the pin numbering on the schematic that's not.

Cam N6GA

306. Re: ATS-3A thump

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-16 04:32:11 UTC
From: camqrp
Topic: 246 Message: 306

Going....Going...

Adding the extra capacitance at C54 knocked the click down from 20 mV
to 10 mV.... I can't call it a thump any more!

- Cam N6GA

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
>
> What seems to have eliminated the mute release click for me was changing
> C54 to 100 ufd. You can tack a 100 ufd cap across the existing C54
and lay
> it down over the regulator.
>

307. Re: [AT_Sprint] Re: ATS-3A thump

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-16 10:16:00 UTC
From: Michael Harnage
Topic: 246 Message: 307

Gone...

I put a 330uF cap @ C54 and all noise on the line is gone.

-mike/w1mt

[camqrp@...] wrote:
Going....Going...

Adding the extra capacitance at C54 knocked the click down from 20 mV
to 10 mV.... I can't call it a thump any more!

- Cam N6GA

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
>
> What seems to have eliminated the mute release click for me was changing
> C54 to 100 ufd. You can tack a 100 ufd cap across the existing C54
and lay
> it down over the regulator.
>

Yahoo! Groups Links

308. Re: [AT_Sprint] Re: ATS-3A thump

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-16 20:46:02 UTC
From: Steven Weber
Topic: 246 Message: 308

>Shouldn't there be a capacitor from pin 8 of U3 to ground?

Isn't needed.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

309. 101! members!! WOW!!!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-18 01:23:05 UTC
From: Roland Whitsitt
Topic: 309 Message: 309

That's all I had. You can go about your hammin now.
Roland N5VWN
flying pig #1100
bumble bee #206?

310. Run for the Bacon, 8/20/2006, 6:00 pm

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-21 00:41:47 UTC
From: AT_Sprint@yahoogroups.com
Topic: 310 Message: 310

Reminder from the Calendar of AT_Sprint
http://groups.yahoo.com/group/AT_Sprint/cal

Run for the Bacon
Sunday August 20, 2006
6:00 pm - 8:00 pm
(This event repeats on the third Sunday of every month.)
Location: Your shack or anywhere

Notes:
This Sunday evening, the Flying Pigs Amateur Radio Club International
will be holding its monthly Run For The Bacon. This is a friendly,
two hour QRP CW Sprint, which is open to ALL radio amateurs, will last
from 9:00 - 11:00PM EDT (0200-0400 UTC Monday).

You may work stations once per band on 160, 80, 40, 20, 15 or 10
Meters. Suggested starting frequencies are 1.812, 3.562, 7.044,
14.062, 21.062, and 28.062 MHz.

The exchange is RST, S/P/C (State, Province, Country) and Flying Pigs
membership number. If you're not a member of the Flying Pigs, and
would like to be; then please cli

Set up birthday reminders
http://us.rd.yahoo.com/cal_us/rem/?http://groups.yahoo.com/group/AT_Sprint/cal?v=9&evt_typ
e=13

Copyright © 2006 All Rights Reserved
www.yahoo.com

Privacy Policy:
http://privacy.yahoo.com/privacy/us

Terms of Service:
http://docs.yahoo.com/info/terms/

311. JOY had w/ATS!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-21 12:12:43 UTC
From: Steve/n0tu
Topic: 311 Message: 311

At work last Thursday I asked one of RF engineers in the lab to look at my ATS over lunch. We concluded my ATS3a's audio, RX and mute switch were working as designed. But all indications were the CPU wasn't? Friday night my CT hiking buddy John/n0hj downloaded fresh code into the CPU. Upon power up the CPU ID was heard! Hooray! After a dozen QSOs this weekend I'd say my ATS3a is alive and well.

Thank you all for debug guidiance and info.

Steve/n0tu

312. Re: [AT_Sprint] JOY had w/ATS!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-21 14:00:47 UTC
From: Petr Ouředník
Topic: 311 Message: 312

Steve,

my hat going down to honour Your job ! Congrats to first QSO's w ATS-3A and enjoy the game with this toy ... I am finishing my ATS-3A too but as I am bussy right now the filter boards waiting for winding :)

CU on the air soon.

Petr, OK1RP
> ------------ Původní zpráva ------------
> Od: Steve/n0tu <n0tu.qrp@...>
> Předmět: [AT_Sprint] JOY had w/ATS!
> Datum: 21.8.2006 14:15:05
> --
> At work last Thursday I asked one of RF engineers in the lab to look
> at my ATS over lunch. We concluded my ATS3a's audio, RX and mute
> switch were working as designed. But all indications were the CPU
> wasn't? Friday night my CT hiking buddy John/n0hj downloaded fresh
> code into the CPU. Upon power up the CPU ID was heard! Hooray! After a
> dozen QSOs this weekend I'd say my ATS3a is alive and well.
>
> Thank you all for debug guidiance and info.
>
> Steve/n0tu
>
>
>
>
>
>
>

Petr Ouředník
00420608230010 (private)
indians@...
www.qsl.net/ok1rp

313. Oops! and Thanks!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-22 03:07:19 UTC
From: camqrp
Topic: 313 Message: 313

This one falls into the "leave well-enough alone" and "if it ain't broke....." bin.

Having pulled C54 and replaced it with a 100 mF cap, I got greedy and pulled it to replace it with a 220 mF cap. Could have just tacked another 100 on the bottom of the board, but NOOOO, somehow I thought it would be a "cleaner" installation this way.

You can only heat up those little pads so many times. I ended up lifting the pad and the plate-through from the bottom side of the board, so the new cap had nothing to solder itself to. So I had to lay the big 200 mF on it's side on the top of the board so that I could get to those pads for the soloder job. Now it really looks tacky, but that click is very much gone.

Speaking of which, Thanks! to all of you who pitched in with help on the problem. This is one great group of hammies! My ATS 3A is really runing smooth now.

72/73,

Cam N6GA

314. ATS3A Building Experience for Newbies

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-22 17:14:23 UTC
From: David Lear
Topic: 314 Message: 314

Hi Gang

Just joined the group and thought the you might like to hear my building experiences. First of all, the rig is working on 20M, without optimizing the calibration, with some help from W1MT. Haven't completed the other band boards yet....those darned toroids! About 3.5W out with 11.8v in. Used Norcal's PCB holder...highly recommended.

I managed to solder U7 the wrong way around and so removed it with fine wire under each leg. In handling it with fine tweezers it flew off into never-never land and was lost. That's kinda surprising considering it's size. That's a $15 error! I also lifted the PC land on pin 20 and now have a fine wire link to R16/C33. Lesson learned - don't use tweezers except for perhaps handling away from the PCB and then very carefully, and off course, double check the chip orientation. My final method of transportation and mounting was with an exacto knife and beeswax (thanks Steve).

I also had R10 fly off and overheated the replacement from Steve.It measured about 600K instead of 267K. Rather than go back again to Steve I replaced it with a 270K 1/4W regular resistor. (Frys here in TX didn't have 1/8W).

Going to use it exclusively for SS so weight saving is of the essence . Not decided on an enclosure yet but it's hard to beat W1MT's balsa method. Using an early version of the Te Ne Key paddles so have to improve on those. Post is a bit long but thought it might help somebody.

72,Dave NE5DL

315. test

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-22 23:56:19 UTC
From: Karl Larsen
Topic: 315 Message: 315

test

316. Getting a new build working

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-22 21:24:36 UTC
From: Karl Larsen
Topic: 316 Message: 316

I was an early ATS-3 builder and there were not many other guys on the air with one. I got mine working but not quite right. There was something not working right and I asked Steve. He said send it back to him which I did and he found I had mounted the multi load resistors chip backward (I didn't know there was a backwards).

Since then I have had nothing but fun with the tiny rig. It has flown almost around the world. I got several Hams interested in it because I would use it for all the QRP contests like the Fox Hunts and Field Day. I worked 3Y0X on Peter One Island using the rig. I sent that gang a picture of it. They really enjoyed the the irony in their big ICOM working the tiny radio.

I did well in the Summer Fox Hunts this year. In fact an idiot on the Fox Committee accused me of running too much power.

73 Karl

317. Re: ATS3A Building Experience for Newbies

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-23 08:36:53 UTC
From: Kurt
Topic: 314 Message: 317

>Lesson learned -
> don't use tweezers except for perhaps handling away from the PCB and
> then very carefully,

Okay...so I have to ask since I've brought this up on here and on QPR-L before. What brand of tweezers are you using? How much did you pay for it?

Kurt - ae6uj

318. Re: ATS3A Building Experience for Newbies

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-23 10:42:43 UTC
From: Bruce Beford
Topic: 314 Message: 318

I have always used a high quality set of tweezers (acually tongs) designed for stamp collecting. I prefer Showguard #908. sharp tip, 6 inches long. They have a nice heft to them and are very stable. About 8 bucks from a stamp supply dealer. A google search of "Showguard Tongs" will tun up many vendors if you don't have a stamp shop near you. (fewer and fewer of us do!)

-Bruce N1RX

--- In AT_Sprint@yahoogroups.com, "Kurt" <ae6uj@...> wrote:
>
> >Lesson learned -
> > don't use tweezers except for perhaps handling away from the PCB and
> > then very carefully,
>
> Okay...so I have to ask since I've brought this up on here and on QPR-L before. What
> brand of tweezers are you using? How much did you pay for it?
>
> Kurt - ae6uj
>

319. Volume control for ATS rigs

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-23 10:44:00 UTC
From: Bruce Beford
Topic: 319 Message: 319

This came up on qrp-l last night, so I thought I would post my
response here as well.

Kurt Loken wrote:

My favorite example of this technology being used for
a function in a QRP radio is the Panasonic ALC chip in
the ATS-3A that I recently built. Is anyone using
this radio missing a volume knob?

Kurt:

By this, I wonder if you mean you WISH it had a volume control? If so,
Radio Shack carries a nice short pigtail for your headphones that has
an in-line volume control. I use one on my ATS3 and 3a. Works great,
and costs about $8, IIRC.

-Bruce N1RX

320. Re: Getting a new build working

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-23 12:17:32 UTC
From: qrq_cw
Topic: 316 Message: 320

Karl Larsen <k5di@...> wrote:

> I had mounted the multi load resistors chip
> backward (I didn't know there was a backwards).

It's a network. One common, with multiple pins
for the individual resistors. You would've ended
up with only one pin being properly referenced, with
the remaining gates/switches being weakly pulled to
whatever the one referenced pin was, depending on
it's state. Unpredictable, to say the least.

> I worked 3Y0X on Peter One Island using the rig.

That's fantastic.

> In fact an idiot on the Fox Committee accused me of running
> too much power.

Hearing your callsign is like adding 6dB.

CU at DCHF?

Mark K5LXP
Albuquerque, NM

321. Re: ATS3A Building Experience for Newbies

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-23 12:19:22 UTC
From: qrq_cw
Topic: 314 Message: 321

"Kurt" <ae6uj@...> wrote:
--- Kurt <ae6uj@...> wrote:

> What brand of tweezers are you using?

"EXCELTA" Made in Switzerland. I have 2
I use the most. One has a slight bend and
is kind of blunt, the other is straight and
pointy.

> How much did you pay for it?

I think they were about $7 ea.

Mark K5LXP
Albuquerque, NM

322. Re: [AT_Sprint] Re: Getting a new build working

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-23 14:05:09 UTC
From: Karl Larsen
Topic: 316 Message: 322

qrq_cw wrote:

Karl Larsen wrote:

I had mounted the multi load resistors chip
backward (I didn't know there was a backwards).

It's a network. One common, with multiple pins
for the individual resistors. You would've ended
up with only one pin being properly referenced, with
the remaining gates/switches being weakly pulled to
whatever the one referenced pin was, depending on
it's state. Unpredictable, to say the least.

Yes it was odd Mark. I recall now that 30 meters didn't work. It took Steve to find the problem.

I worked 3Y0X on Peter One Island using the rig.

That's fantastic.

In fact an idiot on the Fox Committee accused me of running
too much power.

Hearing your callsign is like adding 6dB.

Actually I was using my beam and I was 6DB stronger :-)

CU at DCHF?

Nope sorry. I want to make the QRP meeting but just can't.

73 Karl K5DI

Mark K5LXP
Albuquerque, NM

Yahoo! Groups Links

<*> To visit your group on the web, go to:
http://groups.yahoo.com/group/AT_Sprint/

<*> To unsubscribe from this group, send an email to:
AT_Sprint-unsubscribe@yahoogroups.com

<*> Your use of Yahoo! Groups is subject to:
http://docs.yahoo.com/info/terms/

323. Re: ATS3A Building Experience for Newbies

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-23 16:29:11 UTC
From: David Lear
Topic: 314 Message: 323

The tweezers are EROP3CSAV,stainless steel, non magnetic,$5 at Frys.

BTW, Forgot to ask last post. what's the news on ATS4?

72,Dave

324. Re: Volume control for ATS rigs

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-23 16:45:05 UTC
From: Kurt
Topic: 319 Message: 324

> Kurt:
>
> By this, I wonder if you mean you WISH it had a volume control? If so,
> Radio Shack carries a nice short pigtail for your headphones that has
> an in-line volume control. I use one on my ATS3 and 3a. Works great,
> and costs about $8, IIRC.
>
> -Bruce N1RX
>

Hello Bruce,

Oh my no...that is not what I meant. I love it. I love not having a volume control. I find the listening experience on the ATS to be very comfortable.

I guess I was trying to communicate that here is a case where leveraging cell related technology made a better QRP radio.

Sorry if I wasn't clear.

Regards,

Kurt - ae6uj

325. test

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-22 23:50:43 UTC
From: Karl Larsen
Topic: 315 Message: 325

This is a test.

326. Re: ATS3A Building Experience for Newbies

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-24 01:37:45 UTC
From: Kurt
Topic: 314 Message: 326

--- In AT_Sprint@yahoogroups.com, "David Lear" <delear@...> wrote:
>
> The tweezers are EROP3CSAV,stainless steel, non magnetic,$5 at Frys.
>
> BTW, Forgot to ask last post. what's the news on ATS4?
>
> 72,Dave
>

Mine are FinePoint AA SA ESD 130mm tweezers. Vomm Germany. ...at least that's all the stuff written on the end of it. I bought mine at Fry's when I used to live in the bay area. I
did pay upwards of $20 though. I swear to you guys that I have never spit a part out these...but maybe I have the hands of a surgeon and I don't know it...damn, I knew I went into the wrong line of work. ;)

Regards,

Kurt - ae6uj

327. Re: [AT_Sprint] Re: ATS3A Building Experience for Newbies

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-24 02:35:29 UTC
From: Chuck Milam, KF9FR
Topic: 314 Message: 327

```
-----BEGIN PGP SIGNED MESSAGE-----
Hash: SHA1

David Lear wrote:

> BTW, Forgot to ask last post. what's the news on ATS4?

Sorry if this is a newbie question, but: There's going be an ATS4?
Really? Are there any details available?

- --
Chuck Milam, KF9FR
KF9FR@...

-----BEGIN PGP SIGNATURE-----
Version: GnuPG v1.4.3 (MingW32)
Comment: Using GnuPG with Mozilla - http://enigmail.mozdev.org

iD8DBQFE7Q/ylh+fpI+PkrcRAl10AJ4vO2j5fF5Vi6o4cJiJ75dJ0e/cfQCgnp6V
Q8N22XSe5lH6icidksWjX8U=
=sEL+
-----END PGP SIGNATURE-----
```

328. re ats-3 (not A) filter mod details

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-24 19:54:45 UTC
From: ohwenzelph
Topic: 328 Message: 328

hi

for the crystal filter mods at
http://www.w1mt.qrpradio.com/filter.html
apparently you can fit in a surface mount inductor if
you tee-pee three parts together at the input to the
filter with c6(100ph) and the 220pf going to ground.
have not seen a picture of this and i am not sure what
others have used for the inductor.
Craig NR4E offered the component kit but i did not grab one.
if you know what was used for an inductor please let me know.
also if you have a picture of the tee-pee mod could you please
post it to the groups "photos"
thanks

for 40 meters with the murata filter at
http://www.w1mt.qrpradio.com/dl2hrp.html
at the bottom of the page, i think that everything to
the left of pin 6 stays the same and that pin 6 is
still connected to everything to the left of it where
it connects to "c5" (that has changed to 37pf). ie connected to
c1f and l1f etc leading to pin 7.

does that seem correct?

thanks &72
jerry aa1of

329. Re: [AT_Sprint] re ats-3 (not A) filter mod details

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-24 22:49:05 UTC
From: Gil Stacy
Topic: 328 Message: 329
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

330. Re: [AT_Sprint] re ats-3 (not A) filter mod details

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-25 01:03:40 UTC
From: John A. Evans - N0HJ
Topic: 328 Message: 330

If you look at the photos of my ATS-3 board under my Batman project tin, you may be able to see the pyramid - yes, not pretty, but not really noticeable either.

72 - john - n0hj

331. Re: [AT_Sprint] re ats-3 (not A) filter mod details

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-25 06:33:20 UTC
From: Lutz Bergner
Topic: 328 Message: 331

Hi Jerry,
>
>
> for 40 meters with the murata filter at
> http://www.w1mt.qrpradio.com/dl2hrp.html
> at the bottom of the page, i think that everything to
> the left of pin 6 stays the same and that pin 6 is
> still connected to everything to the left of it where
> it connects to "c5" (that has changed to 37pf). ie connected to
> c1f and l1f etc leading to pin 7.
>
absolutely right, provided you still have the original T/R series
circuit plus diodes in place. More generally: The matching of the
ceramic filter consists of two T- circuits The lead in of the first is
C5 37pF. The lead out of the second T is the 22p Capacitor on the main
board. One of the 10uH SMCC inductors is the first inductor. You may use
a SMCC 15uH , SMD 15uH or 56T on AMIDON T30 for the second. Put the
ceramic filter to the place where L3F once resided. You have to drill at
least one additional whole. There is no adjustment needed. I tried to
keep the Qs low.
Good luck in building. The result will be quite amazing...;-)

72s

Lutz, DL2HRP

>
> thanks &72
> jerry aa1of
>
>
>
>
>
--
iXadmin

---
* Systemadministration
* Netzwerkberatung
* Internetdienstleistungen

Tel.: 034922 66717
Fax.: 034922 66718
mobil: 0175 2631032

VOIP(sipgate): 01801 6666260511
Mail: l.bergner@...

332. Re: re ats-3 (not A) filter mod details

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-25 11:22:42 UTC
From: Bruce Beford
Topic: 328 Message: 332

photos of the infamous "teepee of parts has been posted to the N1RX
ATS3/3A photo folder. Also my version of the schematic after the mods
is there.
Hope this helps.
-Bruce N1RX

333. Poll results for AT_Sprint

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-26 08:18:57 UTC
From: AT_Sprint@yahoogroups.com
Topic: 333 Message: 333

The following AT_Sprint poll is now closed. Here are the
final results:

POLL QUESTION: What is the percentage your ATS rig gets used compared to your other HF rigs?

CHOICES AND RESULTS
- 90% to 100% of the time, 2 votes, 10.53%
- 75% to 89%, 3 votes, 15.79%
- 50% to 74%, 4 votes, 21.05%
- 25% to 50%, 2 votes, 10.53%
- less than 25%, 8 votes, 42.11%

For more information about this group, please visit
http://groups.yahoo.com/group/AT_Sprint

For help with Yahoo! Groups, please visit
http://help.yahoo.com/help/us/groups/

335. Help with an article

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-26 13:33:07 UTC
From: fixnwrtr
Topic: 335 Message: 335

I'm writing an article for the local ham radio club newsletter and I'd like a little help. The article is about creative and innovative designs for housing homebrew projects like the Sprint. Many of you have come up with different designs and I'd like to borrow pictures from the archives to illustrate the article. I'd also like to ask some questions of those who agree to be involved. If you're interested, please post your comments here and I'll contact you by email to make the Q&A easier. I will list each member's information (for those who participate) in the article and will let you know when the PDF version of the newsletter is online. I am also the newsletter editor for the Pikes Peak Radio Amateur Association (PPRAA). This issue should be out by September 1.

Thanks in advance for your help. I am really impressed with the pictures of your projects and with the helpfulness of all the members here and look forward to showcasing your projects in the article. I have learned so much from reading all the posts here and avidly read through every single word from all the posts.

72 as always...
Jackie
AC0CA

336. Enclosure article

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-28 14:17:05 UTC
From: fixnwrtr
Topic: 336 Message: 336

I want to thank all of you who offered your help and access to your photos and websites for my article on creative enclosures and answered my questions. Your contribution will make the article interesting and fun. I learned a lot from all of you.

If anyone else would like to allow me to use their photos and answer a few questions for me, please let me know before Wednesday.

Thank you all again.

73, as always...

Jackie AC0CA

337. Re: [AT_Sprint] Enclosure article

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-28 17:18:05 UTC
From: Terry WA0ITP
Topic: 336 Message: 337

Hi Jackie,
Not sure if I responded earlier, if not please feel free to use anything on my web site..
http://www.wa0dx.org/wa0itp/ats3.html

72 73
Terry, WA0ITP
www.wa0dx.org/wa0itp

----- Original Message -----
From: fixnwrtr
To: AT_Sprint@yahoogroups.com
Sent: Monday, August 28, 2006 9:17 AM
Subject: [AT_Sprint] Enclosure article

I want to thank all of you who offered your help and access to your
photos and websites for my article on creative enclosures and answered
my questions. Your contribution will make the article interesting and
fun. I learned a lot from all of you.

If anyone else would like to allow me to use their photos and answer a
few questions for me, please let me know before Wednesday.

Thank you all again.

73, as always...

Jackie AC0CA

No virus found in this incoming message.
Checked by AVG Free Edition.
Version: 7.1.405 / Virus Database: 268.11.6/428 - Release Date: 8/25/2006

338. Sprint enclosures

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-29 01:16:05 UTC
From: fixnwrtr
Topic: 338 Message: 338

Mike, would you mind letting me use the new photos you posted and ask a few questions about your enclosure? It's for the article I'm writing for the local ham club newsletter. I haven't seen a sheet plastic enclosure before and it is very different. I can email you with the questions.

73
Jackie AC0CA

339. Re: Enclosure article

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-08-29 01:40:32 UTC
From: fixnwrtr
Topic: 336 Message: 339

No, Terry, you didn't. Thanks for responding. I do appreciate it. I'll post the link for the PDF version of the newsletter when it's available.

73
Jackie AC0CA

--- In AT_Sprint@yahoogroups.com, "Terry WA0ITP" <wa0itp@...> wrote:
>
> Hi Jackie,
> Not sure if I responded earlier, if not please feel free to use anything on my web site.. http://www.wa0dx.org/wa0itp/ats3.html
>
>
> 72 73
> Terry, WA0ITP
> www.wa0dx.org/wa0itp
>

340. Fw: ATS-III Cheat Sheet

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-02 21:36:58 UTC
From: Terry WA0ITP
Topic: 340 Message: 340

I posted this on QRP-L and thought I should post it here also.. Hope it
helps someone..

72 73
Terry, WA0ITP
www.wa0dx.org/wa0itp

----- Original Message -----
From: "Terry WA0ITP" <wa0itp@...>
To: "David Ek" <david.ek@...>; <qrp-l@...>
Sent: Saturday, September 02, 2006 4:35 PM
Subject: ATS-III Cheat Sheet

> Last year I created a similar document for my ATS3. I condensed some of
> Steve's instructions into a 2 page Word document. It helped me early on.
> It's not nearly as professional looking as David's ATS2 Quick Reference
> Card, which looks outstanding to me, but it is useful. If you wish,
> please feel free to download a copy. It's here
> http://www.wa0dx.org/wa0itp/ats3.html
>
> 72 73
> Terry, WA0ITP
> www.wa0dx.org/wa0itp
>
>
> ----- Original Message -----
> From: "David Ek" <david.ek@...>
> To: <qrp-l@...>
> Sent: Saturday, September 02, 2006 3:40 PM
> Subject: [QRP-L] ATS-II quick reference card
>
>
>> Gang,
>>
>> I've had my AT Sprint II (not the III or IIIa) assembled for more than a
>> year now but haven't really given it a trial run, so I thought I'd give
>> it a
>> go during QRP Afield this year (Sept 16). My feeble memory banks seem
>> incapable of remembering how to manipulate the menus and features of this
>> rig (or any others), so I made myself a quick-reference card. It's
>> wallet-sized and double-sided and suitable for lamination. I figured I'd
>> share it since I went to the trouble of making it, so you can find it on
>> my
>> web site at
>>
>> http://home.earthlink.net/~david.ek/

>>
>> Look for the link on that page. You can download it as a pdf or as a
>> Powerpoint file (if you want to dork around with it). If you grab it, let
>> me
>> know what you think.
>>
>> 73 de Dave NK0E
>>
>>
>> _____
>> QRP-L mailing list
>> Home: http://mailman.qth.net/mailman/listinfo/qrp-l
>> Help: http://mailman.qth.net/mmfaq.htm
>> Post: mailto:QRP-L@...
>>
>>
>> --
>> No virus found in this incoming message.
>> Checked by AVG Free Edition.
>> Version: 7.1.405 / Virus Database: 268.11.7/436 - Release Date: 9/1/2006
>>
>>
>

341. Re: [AT_Sprint] Fw: ATS-III Cheat Sheet

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-02 21:45:29 UTC
From: W2AGN
Topic: 340 Message: 341

Terry WA0ITP wrote:
> I posted this on QRP-L and thought I should post it here also.. Hope it
> helps someone..
>
> 72 73
> Terry, WA0ITP
> www.wa0dx.org/wa0itp
>
>
> ----- Original Message -----
> From: "Terry WA0ITP" <wa0itp@...>
> To: "David Ek" <david.ek@...>; <qrp-l@...>
> Sent: Saturday, September 02, 2006 4:35 PM
> Subject: ATS-III Cheat Sheet
>
>
>
>> Last year I created a similar document for my ATS3. I condensed some of
>> Steve's instructions into a 2 page Word document. It helped me early on.
>> It's not nearly as professional looking as David's ATS2 Quick Reference
>> Card, which looks outstanding to me, but it is useful. If you wish,
>> please feel free to download a copy. It's here
>> http://www.wa0dx.org/wa0itp/ats3.html
>>
>> 72 73
>> Terry, WA0ITP
>> www.wa0dx.org/wa0itp
>>
>>
>
>
Tried to download your cheat sheet, but got "Object not Found."

--

_ _ _ _ _
/ \ / \ / \ / \ / \ John L. Sielke
(W)(2)(A)(G)(N) http://w2agn.net
_/ _/ _/ _/ _/ http://www.blurty.com/users/w2agn
See the underhanded actions of QRP-ARCI?. http://w2agn.net/qrparci.html

342. ATS in a tin (batteries not included)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-03 01:12:18 UTC
From: Steve/n0tu
Topic: 342 Message: 342

I just burned a few hours putting my baby in a tin. Drilling tin take time and slowly stepping up in drill sizes before you get to the step drill! I used some colored tape to punch out some dots for labeling the buttons for now. I'll make up a label with integrated abbreviated cheatsheet later since this old goats memory is kinda weak! Posted a photo. Will post more later. I'm finding I'm using the ATS more than any other radio I own ...I love this thing! What an amazing little rig! Gotta go to melt solder on that 80m module it's getting dark out!
73 Steve/n0tu

343. new ALT tuner in Batman Tin ATS-3

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-04 16:03:59 UTC
From: n0hj
Topic: 343 Message: 343

Greetings,

I've installed a different tuner in my ATS-3 (check out the photo in my batman tin photo section). The ALT tuner designed by Steve, KD1JV, was slightly modified to permit the possibility of tuning on 80m with an end fed wire with counterpoise. I added a 15.5 uh coil and jumper. Also, I've not added a bridge tuning/coupling circuit yet in my tuner - I thought I'd see if my wire setup was repeatable enough to just go by what the MFJ analyzer told me and then peaking for audio in the field.

Yesterday, I was able to make several QSOs on 40/30/20m on a 45 ft end fed wire mounted near vertically in a nearby tree. The setup is fairly repeatable and the audio peaking seems to be working, so I will save the additional weight for now. Also, the 45 ft wire tunes up fairly well on 80m, so it works on all the ATS-3 bands.

As a little tidbit of information - the Fuchs tuner I had built previously seemed to attenuate signals significantly on 20m. On a four day outing on the Colorado Trail with Steve, N0TU, we were unable to make ANY QSOs at all on any band while we were out. I may revisit the Fuchs tuner to see if I didn't have some "off brand" toroids in it - I really liked the way it tuned up easily, but if you can't make contacts, easy tuning is no advantage.

72 - john - n0hj

344. Barely Hear "20M" and Sidetone

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-05 00:22:29 UTC
From: Daniel Lautenschleger
Topic: 344 Message: 344

I finished assembling the main board of the Sprint ATS-3A and I can barely hear the "20M" announcement when power is applied. The keyer sidetone is barely audible as well. I tried several different headphones and my iPod buds seem to be the loudest.

All voltage checks mentioned in the initial tests/alignment are right on. Any assistance of where to troubleshoot would be appreciated.

-Dan, AB9ME

345. Re: Barely Hear "20M" and Sidetone

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-05 00:55:36 UTC
From: blammy8
Topic: 344 Message: 345

Some more information:

I checked the voltages of U4 and U5 and it appears that I
have audio out voltage (.96V) on pin 3 going to the C19 capacitor
which feeds the audio input of U4 the mute switch. Problem is, there's
no .96VDC on the other side of C19 and thus no 2.2VDC on the audio in
pin of U4.

Solder looks good on both sides of C19. Is there a possible bad
capacitor involved? I wonder why the voltage after going across the
capacitor would actually go higher to the supposed 2.2VDC?

This has to be the suspect area.

--- In AT_Sprint@yahoogroups.com, "Daniel Lautenschleger"
<pooba53@...> wrote:
>
> I finished assembling the main board of the Sprint ATS-3A and I can
> barely hear the "20M" announcement when power is applied. The keyer
> sidetone is barely audible as well. I tried several different
> headphones and my iPod buds seem to be the loudest.
>
> All voltage checks mentioned in the initial tests/alignment are right
> on. Any assistance of where to troubleshoot would be appreciated.
>
> -Dan, AB9ME
>

346. Re: Barely Hear "20M" and Sidetone

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-05 02:39:22 UTC
From: blammy8
Topic: 344 Message: 346

Not hard to imagine...bad solder connections on U4. All is well (and loud) now.
-Dan

--- In AT_Sprint@yahoogroups.com, "blammy8" <pooba53@...> wrote:
>
> Some more information:
>
> I checked the voltages of U4 and U5 and it appears that I
> have audio out voltage (.96V) on pin 3 going to the C19 capacitor
> which feeds the audio input of U4 the mute switch. Problem is, there's
> no .96VDC on the other side of C19 and thus no 2.2VDC on the audio in
> pin of U4.
>
> Solder looks good on both sides of C19. Is there a possible bad
> capacitor involved? I wonder why the voltage after going across the
> capacitor would actually go higher to the supposed 2.2VDC?
>
> This has to be the suspect area.
>
> --- In AT_Sprint@yahoogroups.com, "Daniel Lautenschleger"
> <pooba53@> wrote:
> >
> > I finished assembling the main board of the Sprint ATS-3A and I can
> > barely hear the "20M" announcement when power is applied. The keyer
> > sidetone is barely audible as well. I tried several different
> > headphones and my iPod buds seem to be the loudest.
> >
> > All voltage checks mentioned in the initial tests/alignment are right
> > on. Any assistance of where to troubleshoot would be appreciated.
> >
> > -Dan, AB9ME
> >
>

347. RE: [AT_Sprint] Re: Barely Hear "20M" and Sidetone

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-05 02:47:33 UTC
From: Rob May
Topic: 344 Message: 347

Great Dan! Another ATS-3A springs to life.
73,
Rob

>From: "blammy8" <pooba53@...>
>Reply-To: AT_Sprint@yahoogroups.com
>To: AT_Sprint@yahoogroups.com
>Subject: [AT_Sprint] Re: Barely Hear "20M" and Sidetone
>Date: Tue, 05 Sep 2006 02:39:22 -0000
>
>Not hard to imagine...bad solder connections on U4. All is well (and
>loud) now.
>-Dan
>
>--- In AT_Sprint@yahoogroups.com, "blammy8" <pooba53@...> wrote:
> >
> > Some more information:
> >
> > I checked the voltages of U4 and U5 and it appears that I
> > have audio out voltage (.96V) on pin 3 going to the C19 capacitor
> > which feeds the audio input of U4 the mute switch. Problem is, there's
> > no .96VDC on the other side of C19 and thus no 2.2VDC on the audio in
> > pin of U4.
> >
> > Solder looks good on both sides of C19. Is there a possible bad
> > capacitor involved? I wonder why the voltage after going across the
> > capacitor would actually go higher to the supposed 2.2VDC?
> >
> > This has to be the suspect area.
> >
> > --- In AT_Sprint@yahoogroups.com, "Daniel Lautenschleger"
> > <pooba53@> wrote:
> > >
> > > I finished assembling the main board of the Sprint ATS-3A and I can
> > > barely hear the "20M" announcement when power is applied. The keyer
> > > sidetone is barely audible as well. I tried several different
> > > headphones and my iPod buds seem to be the loudest.
> > >
> > > All voltage checks mentioned in the initial tests/alignment are right
> > > on. Any assistance of where to troubleshoot would be appreciated.
> > >
> > > -Dan, AB9ME
> > >
> >
>

>
>
>

348. Processor noise in Rx

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-05 04:55:57 UTC
From: Dave
Topic: 348 Message: 348

Has anyone else noticed any processor-related noise getting into the Rx? I've notice it sometimes on 20M where it varies with whether or not I have a control button depressed (consequently changing the timing through the various software loops) and where I'm tuning in the band. It actually seems quietest when holding the Up or Down button.

I'm running a modified version of W1MT's software, so the timing through some of the software loops may be unique to my rig. It's possible that other software variants would have different characteristics. I also have slight tweaks to the hardware in the component values I have in the band modules and the changes previously discussed to get rid of the unmute thump.

Dave, WA3OFF

349. Re: new ALT tuner in Batman Tin ATS-3

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-05 13:08:00 UTC
From: fixnwrtr
Topic: 343 Message: 349

Were you able to make QSOs before your trip on the CT or did you not try it out before you left?

73,
Jackie AC0CA

--- In AT_Sprint@yahoogroups.com, "n0hj" <jaevans@...> wrote:
>
> Greetings,
>
> I've installed a different tuner in my ATS-3 (check out the photo in
> my batman tin photo section). The ALT tuner designed by Steve, KD1JV,
> was slightly modified to permit the possibility of tuning on 80m with
> an end fed wire with counterpoise. I added a 15.5 uh coil and
> jumper. Also, I've not added a bridge tuning/coupling circuit yet in
> my tuner - I thought I'd see if my wire setup was repeatable enough to
> just go by what the MFJ analyzer told me and then peaking for audio in
> the field.
>
> Yesterday, I was able to make several QSOs on 40/30/20m on a 45 ft
> end fed wire mounted near vertically in a nearby tree. The setup is
> fairly repeatable and the audio peaking seems to be working, so I will
> save the additional weight for now. Also, the 45 ft wire tunes up
> fairly well on 80m, so it works on all the ATS-3 bands.
>
> As a little tidbit of information - the Fuchs tuner I had built
> previously seemed to attenuate signals significantly on 20m. On a
> four day outing on the Colorado Trail with Steve, N0TU, we were unable
> to make ANY QSOs at all on any band while we were out. I may revisit
> the Fuchs tuner to see if I didn't have some "off brand" toroids in it
> - I really liked the way it tuned up easily, but if you can't make
> contacts, easy tuning is no advantage.
>
> 72 - john - n0hj
>

350. Sparton Sprint

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-05 18:57:04 UTC
From: Karl Larsen
Topic: 350 Message: 350

Yesterday I hooked up my earphones and Bencher paddle to my ATS-3
and powered it from a big car-starter battery. I was really chubby :-)
but cared not.

I used my Elecraft T1 tuner and worked both 20 and 40 meters. Both
bands were open so it was fun, and the ATS-3 worked without a single hitch.

73 Karl

351. Re: [AT_Sprint] Spartan Sprint

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-05 19:37:49 UTC
From: Michael Harnage
Topic: 350 Message: 351

I too played in the Sprint. Using someone else's ATS3
that I had at the house at the time. I weighed in at
0.415 pounds, which is quite chubby for me. :)

Had a good run on 80M. 17 q's in one 30 minute
stretch. 80M is getting back into shape for the fall
and winter.

-mike/w1mt

--- Karl Larsen <k5di@...> wrote:

> Yesterday I hooked up my earphones and Bencher
> paddle to my ATS-3
> and powered it from a big car-starter battery. I was
> really chubby :-)

Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

352. Lookiing to Buy

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-05 19:45:06 UTC
From: w1dfu
Topic: 352 Message: 352

I am looking to buy an assembled ATS 3.

Please contact me off list.

Thank You !

Bert W1DFU

353. Re: [Spam] [AT_Sprint] Lookiing to Buy

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-05 21:01:14 UTC
From: Monty N5ESE
Topic: 352 Message: 353

Bert:

I have an ATS 3 that I bought from Doc K0EVZ about a year ago, and I've had it on the air once last fall (works fine). It was hand-built by the designer himself, Steve Weber KD1JV, especially for Doc. Doc says the filter was hand-tuned to provide a narrow response, but I can't vouch for that (sounds about like my ATS-1, which is indeed pretty narrow). I can send some pix, if you're interested. There is half a picture (second row, far right) on my "Altoids" page:

http://www.dit-dididit-dit.com/altoids_display.htm

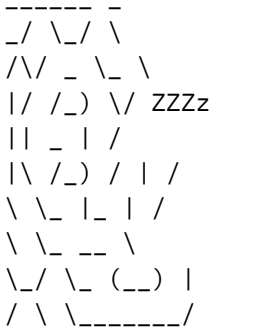
I have an ATS-1 that I built myself, that I'm partial to (because I built it), and I also have a K1/4 that I built, so I end up using those, and not using the ATS3. Hence, I'm willing to part with the ATS3.

73,
monty N5ESE
http://www.dit-dididit-dit.com

***** Original Message from ' w1dfu' follows *****
> I am looking to buy an assembled ATS 3.
>
> Please contact me off list.
>
> Thank You !
>
> Bert W1DFU
>
>
>
>
>
>
>
> Yahoo! Groups Links
>
>
>
>
>
>
>
>
>

Good advice from Mom: "Play Nice!"
;-)

Monty Northrup, N5ESE (ex-N5FC)
Austin, Texas
e-mail: n5ese@...
web page (ham): http://www.dit-dididit-dit.com
web page (home): http://www.io.com/~maddog



354. Re: Processor noise in Rx (or not)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-05 22:15:43 UTC
From: Dave
Topic: 348 Message: 354

You know, I really don't know if this noise I'm hearing is processor related or not. I beginning to think it's not. It seems to change with whether or not I have a tune up or down button depressed, but I can't seem to determine a pattern. Sometimes the noise is there, but usually not. Sometimes it happens only when the tune button is down and goes away when the button is released. Other times it disappears when the tune button is down and comes back when the button is released. It seems to disappear entirely if I tune away far enough, but sometimes doesn't return when I tune back. Usually it's faint when it's there at all, but sometimes it's louder. Sometimes it will fade out by itself.

It's really strange. I would not have distinguished it from normal background noise except for its tendency to change with a press or release of the tune button.

Dave, WA3OFF

355. Re: [Spam] [AT_Sprint] Lookiing to Buy

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-05 22:42:54 UTC
From: Bert Morton
Topic: 352 Message: 355

Monty,

I think I may have jumped the gun as to what I was looking for, but I'm not sure. Is your ATS 3 the 3 band or 4 band model ? I think I should have specified ATS 3A.

In either event I am interested is seeing some pix.

Thanks,

Bert

----- Original Message -----
From: "Monty N5ESE" <n5ese@...>
To: <AT_Sprint@yahoogroups.com>
Sent: Tuesday, September 05, 2006 5:01 PM
Subject: Re: [Spam] [AT_Sprint] Lookiing to Buy

> Bert:
>
> I have an ATS 3 that I bought from Doc K0EVZ about a year ago, and I've
> had it on the air once last fall (works fine). It was hand-built by the
> designer himself, Steve Weber KD1JV, especially for Doc. Doc says the
> filter was hand-tuned to provide a narrow response, but I can't vouch for
> that (sounds about like my ATS-1, which is indeed pretty narrow). I can
> send some pix, if you're interested. There is half a picture (second row,
> far right) on my "Altoids" page:
>
> http://www.dit-dididit-dit.com/altoids_display.htm
>
> I have an ATS-1 that I built myself, that I'm partial to (because I built
> it), and I also have a K1/4 that I built, so I end up using those, and not
> using the ATS3. Hence, I'm willing to part with the ATS3.
>
> 73,
> monty N5ESE
> http://www.dit-dididit-dit.com
>
> ***** Original Message from ' w1dfu' follows *****
>> I am looking to buy an assembled ATS 3.
>>
>> Please contact me off list.
>>
>> Thank You !
>>
>> Bert W1DFU

>>
>>
>>
>>
>>
>>
>>
>> Yahoo! Groups Links
>>
>>
>>
>>
>>
>>
>>
>>
>
>
> Good advice from Mom: "Play Nice!"
> ;-)
>
> Monty Northrup, N5ESE (ex-N5FC)
> Austin, Texas
> e-mail: n5ese@...
> web page (ham): http://www.dit-dididit-dit.com
> web page (home): http://www.io.com/~maddog
>
> ______ _
> _/ _/ \
> /\/ _ _ \
> |/ /_) \/ ZZZz
> || _ | /
> |\ /_) / | /
> \ _ |_ | /
> \ _ __ \
> _/ _ (__) |
> / \ _______/
>
>
>
>
>
> Yahoo! Groups Links
>
>
>
>
>
>
>
>

>
> --
> No virus found in this incoming message.
> Checked by AVG Free Edition.
> Version: 7.1.405 / Virus Database: 268.11.7/437 - Release Date: 9/4/2006
>
>

356. Re: [Spam] [AT_Sprint] Lookiing to Buy

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-05 22:53:36 UTC
From: jaevans@pcisys.net
Topic: 352 Message: 356

Bert,

The ATS-2, ATS-3, and ATS-3a are all four band versions for 80/40/30/20
while the original ATS is only three bad - 40/30/20

72 - john - n0hj

This message was sent using Endymion MailMan.
http://www.endymion.com/products/mailman/

357. Re: [Spam] [AT_Sprint] Lookiing to Buy

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-05 23:29:44 UTC
From: Bert Morton
Topic: 352 Message: 357

Thanks !
----- Original Message -----
From: <jaevans@...>
To: <AT_Sprint@yahoogroups.com>
Sent: Tuesday, September 05, 2006 6:53 PM
Subject: Re: [Spam] [AT_Sprint] Lookiing to Buy

> Bert,
>
> The ATS-2, ATS-3, and ATS-3a are all four band versions for 80/40/30/20
> while the original ATS is only three bad - 40/30/20
>
> 72 - john - n0hj
>
>
> ----------
>

358. Article on creative enclosures

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-05 23:32:25 UTC
From: fixnwrtr
Topic: 358 Message: 358

I wanted to let everyone who so generously allowed me to use their pictures and answered my questions that the article in the September issue of the Pikes Peak Radio Amateur Association 0-Beat newsletter has been posted to the web at www.ppraa.org if you want to take a look. Thank you again for all your help.

Jackie AC0CA
www.ppraa.org

359. RE: [AT_Sprint] Lookiing to Buy

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-06 14:14:00 UTC
From: Ron Pfeiffer
Topic: 352 Message: 359

If you haven't found one yet I have one in an altoids can I will sell for $160 shipped to you.

Ron

360. Re: [AT_Sprint] Lookiing to Buy

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-06 15:41:05 UTC
From: Bert Morton
Topic: 352 Message: 360

Ron,

I have found one, but thanks for your offer.

Bert
----- Original Message -----
From: "Ron Pfeiffer" <n1zsw@...>
To: <AT_Sprint@yahoogroups.com>
Sent: Wednesday, September 06, 2006 10:14 AM
Subject: RE: [AT_Sprint] Lookiing to Buy

> If you haven't found one yet I have one in an altoids can I will sell for
> $160 shipped to you.
>
> Ron

361. Re: new ALT tuner in Batman Tin ATS-3

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-06 20:13:03 UTC
From: jgaffke
Topic: 343 Message: 361

Hi John,

I've been thinking about tuners as well.
Have no idea what works.

If no bridge is required, perhaps a fixed
inductor could be installed on each band module
of size appropriate to the long wire you typically use.
Tuning is then carried out in the field with a variable
cap common to all bands, could be inside the rig or at
the antenna connector.

A shorting plug across the inductor would allow
this feature to be disabled.

But if the bridge is required, this won't work so well
as the bridge should be between that new inductor and
the rest of the band module.

If a bridge is required, perhaps it should be set up
as a sensitive one powered from the battery. Then borrow
a few microwatts of RF from the output of the DDS filter
when tuning up.

Jerry Gaffke, KE7ER

--- In AT_Sprint@yahoogroups.com, "n0hj" <jaevans@...> wrote:
>
> Greetings,
>
> I've installed a different tuner in my ATS-3 (check out the photo in
> my batman tin photo section). The ALT tuner designed by Steve, KD1JV,
> was slightly modified to permit the possibility of tuning on 80m with
> an end fed wire with counterpoise. I added a 15.5 uh coil and
> jumper. Also, I've not added a bridge tuning/coupling circuit yet in
> my tuner - I thought I'd see if my wire setup was repeatable enough to
> just go by what the MFJ analyzer told me and then peaking for audio in
> the field.
>
> Yesterday, I was able to make several QSOs on 40/30/20m on a 45 ft
> end fed wire mounted near vertically in a nearby tree. The setup is
> fairly repeatable and the audio peaking seems to be working, so I will
> save the additional weight for now. Also, the 45 ft wire tunes up
> fairly well on 80m, so it works on all the ATS-3 bands.
>
> As a little tidbit of information - the Fuchs tuner I had built
> previously seemed to attenuate signals significantly on 20m. On a

> four day outing on the Colorado Trail with Steve, N0TU, we were unable
> to make ANY QSOs at all on any band while we were out. I may revisit
> the Fuchs tuner to see if I didn't have some "off brand" toroids in it
> - I really liked the way it tuned up easily, but if you can't make
> contacts, easy tuning is no advantage.
>
> 72 - john - n0hj
>

362. Re: new ALT tuner in Batman Tin ATS-3

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-06 21:53:51 UTC
From: n0hj
Topic: 343 Message: 362

Hi Jerry,

I like this idea a lot. Maybe I could install some pin sockets and
just plug in some inductors temporarily to see how it works. I'll see
if my ATS-3 with HB ALT will be consistent enough for me when I go out
yet again on the CO Trail tomorrow. If so, I can shave more weight
and dimensions from my setup.

Tnx for the ideas es 72 - john - n0hj

--- In AT_Sprint@yahoogroups.com, "jgaffke" <jgaffke@...> wrote:
>
> Hi John,
>
> If no bridge is required, perhaps a fixed
> inductor could be installed on each band module
> of size appropriate to the long wire you typically use.

363. Re: [AT_Sprint] Re: Processor noise in Rx (or not)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-09 15:23:43 UTC
From: Steven Weber
Topic: 348 Message: 363

>You know, I really don't know if this noise I'm hearing is processor
>related or not. I beginning to think it's not.

Yes, I belive it is. It might be coming in through the mute port connected to the T/R switching fets. I'm thinking of trying to put the processor into one of the sleep modes or changing the internal oscillator frequency while its just doing switch scanning to try and eliminate it, but haven't had a chance try it yet.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

364. Problems with ATS 3 (long)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-13 12:19:14 UTC
From: Bert Morton
Topic: 364 Message: 364

Can anyone offer any thoughts re: this problem ?

Thanks,

Bert

Monty:

RIT was my first thought, but that wasn't the case.

It does appear to have some output, but it's difficult to tell really whats going on. I tried using my MFJ QRP tuner, but the metering is flaky. I'm assuming that's because it's perhaps on some oddball frequency. I can't "find it" as I mentioned using my frequency counter.

I tried it this morning with the 40 meter module and a frequency check using the menu. The CW response is T4TRT.Still assuming it should be on 7040 I found it on the outboard receiver on 7185.

So far using an antenna I haven't heard any signals as well.

Hopefully Steve can shed some light.
.

73,

Bert

> Bert:
>
> I wonder if you have it in RIT mode? This would move the receive
> frequency
> around, while leaving the TX frequency the same.
>
> Do I understand you to say you have no power output, and that's why you
> can't measure frequency?
>
> Does this happen on all bands, or just 80M?
>
> It's been a while since I've used the rig, and I don't remember all the
> operating modes, but there are a number of them. In case you don't have
> the right manual, I'm attaching the manual I used.
>
> Maybe the designer, Steve Weber, can shed some light, or the guys on the
> AT-Sprint group...
>
> Steve's e-mail is:
>

> kd1jv@...
>
> Be sure to tell him it's the ATS3, and not the ATS3a. And you can tell
> him
> it's the one he built for Doc.
>
> AT-Sprint group is
>

>
> At 09:38 PM 9/12/2006, Bert Morton wrote:
>>Hi Monty,
>>
>>ATS 3 arrived today. I seem to be having a problem with it's operation. As
>>far as I can tell it is "stuck" on about 3750.
>>
>>It is my understanding that with the 80 meter module installed when the
>>rig is powered up it should be on 3560.
>>
>>When I read the frequency with the menu option the response is 56TRT. When
>>I transmit I hear it in an outboard receiver on 3750.
>>
>>I have tried direct frequency entry and have inputed various frequencies,
>>but the rig continues to transmit on 3750. When I enter a frequency
>>directly the readout is the frequency I entered, but no matter what I do
>>it still transmits at 3750.
>>
>>Even though I'm hearing a signal on an outboard receiver, I can't find any
>>frequency out using a frequency counter.
>>
>>Hopefully its only operator error and you can set me straight.
>>
>>Thanks
>>
>>Bert
>>

365. Re: [AT_Sprint] Problems with ATS 3 (long)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-13 13:14:22 UTC
From: Michael Harnage
Topic: 364 Message: 365

I have not heard of anything like this before. Here
are a few questions:

What is your outboard receiver?

Have you tried recalibrating the ATS? The manual can
help you there or check out my webpage at <
http://w1mt.qrpradio.com/ats3calibration.html >.

Depending on how old the rig is, it may be worthwhile
to update the firmware and then see what is happening.
It might clear it up.

-mike/w1mt

--- Bert Morton <hamradioguy@...> wrote:

>
> Can anyone offer any thoughts re: this problem ?

_____
Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

366. Re: [AT_Sprint] Problems with ATS 3 (long)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-13 14:16:29 UTC
From: Karl Larsen
Topic: 364 Message: 366

Michael Harnage wrote:
> I have not heard of anything like this before. Here
> are a few questions:
>
> What is your outboard receiver?
>
> Have you tried recalibrating the ATS? The manual can
> help you there or check out my webpage at <
> http://w1mt.qrpradio.com/ats3calibration.html >.
>
> Depending on how old the rig is, it may be worthwhile
> to update the firmware and then see what is happening.
> It might clear it up.
>
Hi Mike, I agree but let us be careful too. I think we need this
information:

1. Did you build this ATS3? How many years ago?

2. Is it a ATS3 or a ATS3A?

The first step is to use the manual and do a complete re-calibration
on the radio. Everything should tune proper and when done you should be
able to install the 40 meter module and hear the transmitter on another
receiver on 7.040 MHz. With the ATS3 listen while a external transmitter
keys.

If all this works go to the manual and tune up the 80 through 20
meter modules as explained. If it doesn't tell us what went wrong.

73 Karl K5DI

> -mike/w1mt
>
>
> --- Bert Morton <hamradioguy@...> wrote:
>
>
>> Can anyone offer any thoughts re: this problem ?
>>
>
>
>
> _____
> Do You Yahoo!?
> Tired of spam? Yahoo! Mail has the best spam protection around

> http://mail.yahoo.com
>
>
>
> Yahoo! Groups Links
>
>
>
>
>
>
>
>
>
>
>
>
>

367. Re: Problems with ATS 3 (long)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-13 16:56:28 UTC
From: Dave
Topic: 364 Message: 367

Is it receiving the correct frequency?

Dave

368. Re: Processor noise in Rx (or not)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-13 17:00:49 UTC
From: Dave
Topic: 348 Message: 368

At Mike's suggestion, I added a 10K resistor and 0.01uF cap to the T/R signal going to the gate of Q1 as I had done for the Mute line and as in Lutz's original version of this circuit and the noise seems to be gone.

Dave, WA3OFF

369. Re: Processor noise in Rx (or not) - ATS3A ONLY

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-14 14:50:47 UTC
From: w1mt
Topic: 348 Message: 369

NOTE: This is peculiar to the ATS3A only.

Yes, this does seem to take care of the noise. I heard the noise as an increase in RF static, not beeps and boops of the processor. Could never get it to occur on demand but on the modified rig I have not heard it in 8 hours of listening on a dummy load so I am fairly well satisfied that it is gone. I have posted a pic of the mod in my folder (you can see the mute line and T/R line mods in the pic).

Some may not notice the noise level rise at all. Only after corresponding with Dave over the last week or two did it become noticable to me.

-mike/w1mt

--- In AT_Sprint@yahoogroups.com, "Dave" <dmertz@...> wrote:
>
> At Mike's suggestion, I added a 10K resistor and 0.01uF cap to the
> T/R signal going to the gate of Q1 as I had done for the Mute line
> and as in Lutz's original version of this circuit and the noise seems
> to be gone.
>
> Dave, WA3OFF
>

370. Re: Processor noise in Rx (or not) - ATS3A ONLY

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-15 21:00:28 UTC
From: Dave
Topic: 348 Message: 370

> Only after corresponding with Dave over the last week or two did it
> become noticable to me.

Yeah, blame me. :)

Since the mod, the noise has not returned for me either. In fact, the
Rx seems generally quieter (or maybe it's my imagination), so I'm quite
satisfied. I'm running out of things to poke around at in the rig.
It's been a great help in learning how the thing works.

Dave

371. Battery packs - long, skip if you've heard this before.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-15 22:21:08 UTC
From: camqrp
Topic: 371 Message: 371

Once the solder smoke cleared and my ATS-3A was alive and well, it was time to turn my thoughts toward a power source for the little beauty.

Coincidentally, I stumbled on a vendor at the local swap meet who was selling 2700 mAh NiMHs for $2 apiece, or 12 for $20. Doing some quick mental calculations, I arrived at the conclusion that that would be about 8 batteries for the ATS-3A and something like 4 left over for my digital camera. (Quick Mental Calculations and Saturday Mornings being mutually exclusive here...)

SO money and batteries changed hands and I was off to find an 8-cell AA battery holder. None showed up so I went to the local Radio Shack where none were found, either. They did have 2 4-cell holders, so I bought those and a couple 9 volt battery clips. After soldering the whole array together and giving the NiMHs a good charge, I put the rig on the air and began churning out the contacts.

All well and good, except that the wattmeter said I was only putting out a bit over 3 watts. I was expecting at least 4 watts out at 10.5 volts, so I started checking into things and discovered the key-down voltage was dropping to something like 9.0, or a drop of 1.5 volts.

To make a long story longer, the culprits turned out to be the contacts inside the battery packs and the 9 volt clips which attached to the tops of the packs. Especially the snap-on clips on the tops of the packs. These things are very cheaply made, and in the presence of some decent current draw they go weak at the knees.

So I scavenged another electronics parts store and found some 4 cell packs that had solder tabs for connectors, and the batteries were arranged so that there were two pairs of batteries lined up end-to-end so that they contacted each other directly with no middle-man contacts in between. The result is only a .5 volt drop on key-down, and 4 watts output from the ATS-3A.

I know, I know, the guy on the other end won't be able to hear the difference between 3 and 4 watts. But as long as I'm drawing that kind of current from the battery pack, I'd prefer it to be going up in RF radiation rather than heating the battery pack parts.

72/73,

Cam N6GA

372. Re: Processor noise in Rx (or not) - ATS3A ONLY

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-15 22:24:04 UTC
From: camqrp
Topic: 348 Message: 372

--- In AT_Sprint@yahoogroups.com, "Dave" <dmertz@...> wrote:
>
> > Only after corresponding with Dave over the last week or two did it
> > become noticable to me.
>
> Yeah, blame me. :)
>
> Since the mod, the noise has not returned for me either. In fact, the
> Rx seems generally quieter (or maybe it's my imagination), so I'm quite
> satisfied. I'm running out of things to poke around at in the rig.
> It's been a great help in learning how the thing works.
>
> Dave
>

So what's this noise sound like? Yeah, I'm running out of things to
poke at, too.

Cam N6GA

373. RE: [AT_Sprint] Re: Processor noise in Rx (or not) - ATS3A ONLY

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-16 15:05:52 UTC
From: Steve
Topic: 348 Message: 373

Have the details on the "processor noise reduction mod" been finalized?
Where are the details posted?

Tnx,
Steve
aa8af

> -----Original Message-----
>
> Since the mod, the noise has not returned for me either. In
> fact, the Rx seems generally quieter (or maybe it's my
> imagination), so I'm quite satisfied. I'm running out of

374. RE: [AT_Sprint] Re: Processor noise in Rx (or not) - ATS3A ONLY

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-16 17:42:44 UTC
From: Michael Harnage
Topic: 348 Message: 374

A schematic fo rhte T/R switching is in the photo section under DL2HRP. Lutz had posted this regarding a different QSK scheme for the ATS3. Steve/KD1JV incorporated it into the ATS3A, but left out the resistor and capacitor on each line (mute and t/r). Turns out the solution to the "processor noise" appears to be to put the resistors and capacitors back. You can see where I did it by looking in the photo section under W1MT.

I would say that if you don't hear the noise, then don't do the mod, as it involves scraping the mask on some traces and cutting traces that are mighty small. Not impossible, but not as easy as soldering smt. :)

The noise sounds like static to me. I was watching on spectrogram one day and it just seems like a 10db increase in the noise floor at random times and durations.

Hope this helps.

-mike

--- Steve <shlawrence@...> wrote:

> Have the details on the "processor noise reduction
> mod" been finalized?
> Where are the details posted?
>
> Tnx,
> Steve
> aa8af
>
>
>
> > -----Original Message-----
> >
> > Since the mod, the noise has not returned for me
> either. In
> > fact, the Rx seems generally quieter (or maybe
> it's my
> > imagination), so I'm quite satisfied. I'm running
> out of
>
>

>
>
> Yahoo! Groups Links
>
>
>
>
>
>
>
>
>

Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

375. Lipo warning

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-16 17:47:18 UTC
From: w1mt
Topic: 375 Message: 375

While troubleshooting recently I left my 3 cell lipo battery hooked up to my ATS rig all day at work. At some point it went below 6 volts as I heard a terrible oscillation in the earphones on the rig. Unhooked the battery and tested with a voltmeter -- 4.95 volts. Uh oh, not good. (A 3 cell lipo should never get below 7.5 volts absolute minimum.) Charging won't work as the charger is sensing that it is a 2 cell pack. nothing to do now except take the battery apart and try to salvage 2 of the cells. :(

So, monitor you lipo's and make sure that they don't get below 2.5v per cell!!!!

73 de w1mt
mike

376. Frequency counter measurement point for LO

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-17 05:28:21 UTC
From: aardvarq
Topic: 376 Message: 376

Hi all,

My best plan to pick off the LO output by the DDS for measurement by a frequency counter (1 M ohm input) has gone bust.

Where is the best place to do this?

TP1 = only has output when in CF mode
Between L1 & L2 = 270 ohms to ground = no signal measurable by my counter
Between pin 19 & 20? = 2x270 ohms to ground = ??

Thanks
-Dave
AE6RQ

377. Re: [AT_Sprint] Frequency counter measurement point for LO

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-17 14:52:28 UTC
From: Steven Weber
Topic: 376 Message: 377

>My best plan to pick off the LO output by the DDS for measurement by a
>frequency counter (1 M ohm input) has gone bust.
>
>Where is the best place to do this?

Is this to be a permanet connection? The best place to connect is the output of the DDS filter, which should have about a 500 mv p-p signal. If this isn't enough to drive the counter, you'll have to somehow increase the sensitivity of the counter.

If you just need more level for testing or checking the LO frequency, than tacking a 2.2 K resistor across R19 (the 3.9 K above the DDS chip) should boost the level up enough for the counter to read at the output of the filter. I do that when I want to use my counter with a X10 scope probe connected to it. The 2.2 K should be removed once the measurment is done, as the resulting level caused by leaving it in will overdrive the mixer LO input.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

378. Re: Lipo warning

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-17 19:16:11 UTC
From: Bruce Beford
Topic: 375 Message: 378

I STRONGLY suggest that anyone using or considering LiPos for power incorporate under/over voltage and overcurrent protection. Small PC boards are now available for this purpose. see the offerings at all-battery.com for examples:

http://www.all-battery.com/index.asp?PageAction=VIEWCATS&Category=178

I am a happy user of these products- that's all. (And, they are on sale right now).

72,
Bruce N1RX

--- In AT_Sprint@yahoogroups.com, "w1mt" <w1mt@...> wrote:
>
> While troubleshooting recently I left my 3 cell lipo battery hooked up
> to my ATS rig all day at work. At some point it went below 6 volts as
> I heard a terrible oscillation in the earphones on the rig. Unhooked
> the battery and tested with a voltmeter -- 4.95 volts. Uh oh, not
> good. (A 3 cell lipo should never get below 7.5 volts absolute
> minimum.) Charging won't work as the charger is sensing that it is a 2
> cell pack. nothing to do now except take the battery apart and try to
> salvage 2 of the cells. :(
>
> So, monitor you lipo's and make sure that they don't get below 2.5v
> per cell!!!!
>
> 73 de w1mt
> mike
>

379. Run for the Bacon, 9/17/2006, 6:00 pm

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-18 00:49:02 UTC
From: AT_Sprint@yahoogroups.com
Topic: 379 Message: 379

Reminder from the Calendar of AT_Sprint
http://groups.yahoo.com/group/AT_Sprint/cal

Run for the Bacon
Sunday September 17, 2006
6:00 pm - 8:00 pm
(This event repeats on the third Sunday of every month.)
Location: Your shack or anywhere

Notes:
This Sunday evening, the Flying Pigs Amateur Radio Club International
will be holding its monthly Run For The Bacon. This is a friendly,
two hour QRP CW Sprint, which is open to ALL radio amateurs, will last
from 9:00 - 11:00PM EDT (0200-0400 UTC Monday).

You may work stations once per band on 160, 80, 40, 20, 15 or 10
Meters. Suggested starting frequencies are 1.812, 3.562, 7.044,
14.062, 21.062, and 28.062 MHz.

The exchange is RST, S/P/C (State, Province, Country) and Flying Pigs
membership number. If you're not a member of the Flying Pigs, and
would like to be; then please cli

Set up birthday reminders
http://us.rd.yahoo.com/cal_us/rem/?http://groups.yahoo.com/group/AT_Sprint/cal?v=9&evt_typ
e=13

Copyright © 2006 All Rights Reserved
www.yahoo.com

Privacy Policy:
http://privacy.yahoo.com/privacy/us

Terms of Service:
http://docs.yahoo.com/info/terms/

380. ATS-3 & Norcal QRP FCC-1 (Frequency Counter) Integration

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-19 07:57:26 UTC
From: aardvarq
Topic: 380 Message: 380

Hi all,

I just finished my integration of the ATS3 and the FCC-1 (http://www.norcalqrp.org/fcc1.htm). Both are mounted in a LMB-139 (5.5x3x1.25") box and it is configured to function as either a standard frequency counter (ignoring the ATS), or as a digital dial for the ATS. It sure won't win any Spartan Sprints, but I have a feeling that it will come in handy.

For those of you who are interested in this, I just posted a summary document called "ATS_FCC-1_Integration_manual_v1.pdf " under the files section of this group. I also posted some construction photos of this new box as well as my original Whitman's tin ATS-3 under the AE6RQ directory.

Many thanks to Steve, Mike, and Bob Okas of Norcal QRP club for your great designs and assistance.

-Dave
AE6RQ

381. No time to build so TRADE?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-20 18:08:42 UTC
From: Ron Pfeiffer
Topic: 328 Message: 381

I have an unbuilt ATS-II and an unbuilt ATS-III.

Anyone want to trade an unbuilit kit for a built one.

There must be someone out there that likes to build.

Ron

382. It's Alive!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-21 01:45:25 UTC
From: blammy8
Topic: 382 Message: 382

One more 3A is alive :-)

I used the vaseline/solder paste/hot air method for mounting the SMD parts which after awhile, I grew to enjoy for goodness sakes.

The only build problems I had were (of course) related to solder connections either not fully heated or bridged. Let me tell you...there's nothing like removing solder bridges from U7!

Oh, and I soldered LF3 incorrectly on the 20M band module. I still need to refine the alignement a bit but all voltages mentioned in the manual with regard to the ICs are almost dead on.

SIP pins were missing from the kit, but a SASE to Steve produced not only the pins, but a 100uF capacitor to replace a 2uF near a voltage regulator (help with key thumps?) and an additional 10uF capacitor that I manged to smoke when reheating solder joints around U4. Nice guy! He even threw in some more magnet wire for the unbuilt band modules I still need to assemble as some folks have reported running out of.

My test setup is not ideal for measuring power output:

1. I'm using 3' long pieces of #20 hookup wire for antenna connections to an SO-239.

2. The dummy load is connected to 50' of RG-59 cable.

3. For receiving I have an 80M dipole that I cannot tune with my antenna tuner because my HF rig is in the shop :-)

At least I have access to a WM-2 :-)

With 9VDC I am measuring .8W forward and .2 reverse.

With 12VDC I am measuring 3W forward and 1W reverse.

Considering antenna is not matched and radio not properly aligned, I can hear 20M CW very well and it's about 8:30 p.m. CST where I'm at.

I think with a nice (short) chunk of LMR-100 replacing the #20 wire for the antenna, using a dipole tuned for my receiving frequency, and doing a better job of alignment, this should be a pretty cool radio that I built for a good ham friend.

Question: Are others getting the 2.5W on 20M with a 9V battery that is mentioned in the manual?

Will report back when all is tuned and it's in the box!

72
AB9ME

383. ATS-3A Power out

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-21 02:07:57 UTC
From: Rob May
Topic: 383 Message: 383

Since AB9ME asked, here's what I get from my ATS-3A at 6, 9 and 12 volts from a regulated bench supply:

	6v	9v	12v
20m	.87w	2.45w	4.09w
30m	1.1 w	2.70w	4.66w
40m	.81w	2.01	3.60w
80m	.91w	2.29w	4.35w

Don't exactly know why it's a little low on 40m, probably in the filter board. I'm very happy with the way this radio has turned out. Anyone else want to throw out some numbers?

Rob
NV5E

384. Re: [AT_Sprint] ATS-3A Power out

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-21 02:19:00 UTC
From: Terry WA0ITP
Topic: 383 Message: 384

At 12.5 volts, I'm getting 3W out across the board, err bands..

72 73
Terry, WA0ITP
www.wa0dx.org/wa0itp

----- Original Message -----
From: Rob May
To: AT_Sprint@yahoogroups.com
Sent: Wednesday, September 20, 2006 9:07 PM
Subject: [AT_Sprint] ATS-3A Power out

Since AB9ME asked, here's what I get from my ATS-3A at 6, 9 and 12 volts
from a regulated bench supply:
6v 9v 12v
20m .87w 2.45w 4.09w

30m 1.1 w 2.70w 4.66w

40m .81w 2.01 3.60w

80m .91w 2.29w 4.35w

Don't exactly know why it's a little low on 40m, probably in the filter
board. I'm very happy with the way this radio has turned out. Anyone else
want to throw out some numbers?
Rob
NV5E

No virus found in this incoming message.
Checked by AVG Free Edition.
Version: 7.1.405 / Virus Database: 268.12.5/451 - Release Date: 9/19/2006

385. First contact

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-21 02:44:16 UTC
From: Bert Morton
Topic: 385 Message: 385

I made my first contacts tonight with my newly acquired ATS3. What a sweet radio.

Haven't had this much fun in a long time (-:

72,

de Bert W1DFU

386. Re: [AT_Sprint] ATS-3A Power out

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-21 06:00:53 UTC
From: Lutz Bergner
Topic: 383 Message: 386

Hi Rob,

mine was a bit low on 40m too originally. I applied Davids W6EMD LP mods
and got well over 3W with 9V. For 40m its C2=820pF C6=470pF.
There are more radical improvements of the PA match around ,but they
definitely should not applied to rigs that run on 12V.
As Steven said - the PA match is a compromise between good match and a
sturdy response to PA mismatch. Mine is a 9V only rig and I get at least
3,4W out of it with 9V.

72s

Lutz,DL2HRP

Am Mittwoch, den 20.09.2006, 21:07 -0500 schrieb Rob May:
> Since AB9ME asked, here's what I get from my ATS-3A at 6, 9 and 12
> volts
> from a regulated bench supply:
> 6v 9v 12v
> 20m .87w 2.45w 4.09w
>
> 30m 1.1 w 2.70w 4.66w
>
> 40m .81w 2.01 3.60w
>
> 80m .91w 2.29w 4.35w
>
> Don't exactly know why it's a little low on 40m, probably in the
> filter
> board. I'm very happy with the way this radio has turned out. Anyone
> else
> want to throw out some numbers?
> Rob
> NV5E
>
>
>
>
>
--
iXadmin

----
* Systemadministration
* Netzwerkberatung
* Internetdienstleistungen

Tel.: 034922 66717
Fax.: 034922 66718
mobil: 0175 2631032
VOIP(sipgate): 01801 6666260511
Mail: l.bergner@...

387. Thoughts on RTTY Tx

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-23 18:42:46 UTC
From: Dave
Topic: 387 Message: 387

I've been giving thought to what it would take to implement RTTY FSK within the ATS-3A (and with suitable tweaks probably would work in the -2 and -3 as well). Looking at the processor clock speed, it seems that no matter how efficient the code, programming the DDS's frequency register or commanding a frequency-register switch would take about half a bit time at 45 baud. That's way too long to work because it means that the incoming bit stream (applied, say, to one of the paddle inputs) would get sampled at most only twice per bit time, far too infrequently to maintain accurate bit timing.

That seems to leave using the FSELECT input of the DDS chip as the only viable way to implement the frequency shifts. My thought is that during Tx, a relatively tight loop, say, the existing straight-key loop, would sample the incoming bit stream and pass it to FSELECT. That leaves the question of how to control FSELECT. That could be done by tying it to either the SCLK, SDATA or FSYNC signal going from the processor to the DDS chip (1 pin lift, 1 jumper). It seems that any one of those lines could be toggled without upsetting the DDS chip as long as the other lines stay quiet. In fact, I think that if either FSYNC or SCLK stays quiet, both of the other lines could be toggled (certainly easy enough to test before modifying the board). There is no need to program the DDS registers during Tx, so the dual use of one of the processor lines would not create a conflict. As long as the T/R line is off and MUTE is active, the frequency-register switching that happens during the command to enable or disable the FSELECT input would go unnoticed. Using the FSYNC line as the dual-purpose signal would minimize that switching.

Apparently the DDS chip maintains phase continuity when switching frequency registers, so that's not a concern. Also, some wording in the DDS's datasheet regarding not meeting set-up times suggests that the FSELECT input signal being asynchronous with respect to MCLK is also not a concern.

Since the current code uses one register for the Tx frequency and the other for the Rx LO, the Rx LO value would have to be restored to the DDS after Tx is switched off.

Does it sound like it will work? Has anyone else done such an implementation? I know there is a document in the files section that describes using a partially-populated (no processor) ATS board with the DDS controlled directly by a PC. I'm talking about an implementation with minimal change to the ATS that retains all existing functionality.

Dave, WA3OFF

388. ats-3(not A) crystal filter

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-24 16:08:45 UTC
From: ohwenzelph
Topic: 388 Message: 388

hi,
in the original design and manual c6 thru c10 were 150pF but later
were changed to 100pF. what effect did that have?

72/73
jerry terres aa1of

389. Re: [AT_Sprint] ats-3(not A) crystal filter

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-24 17:09:18 UTC
From: David D. Meacham
Topic: 388 Message: 389

Oh, Roland,
I heard from Mike earlier:
- - - - -
Hi David,

Your Yahoo ID is yours and not related to the
AT_Sprint group. You will have to change it yourself.
Looks like the last update you made was in 2003. You
were probably 71 at that time. :)

Your email shows up because you are logged in. Others
can see theirs but not yours. This helps keep spambots
from harvesting the addresses.

Hope you enjoy the group! Glad to have you aboard.

73 de w1mt
mike (one of the mods)
- - - - --

I did change my age, too! So everything is either fixed or understood
now. Thanks again.
Dave

390. Re: [AT_Sprint] Thoughts on RTTY Tx

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-24 17:21:05 UTC
From: Steven Weber
Topic: 387 Message: 390

>DDS's frequency register or commanding a frequency-register switch
>would take about half a bit time at 45 baud. That's way too long

The delay in switching the F registers is the same going one way as it is going the other, so it simply time shifts the output in respect to the input keying signal. So long as it competes the task early enough to look for the next baud bit, there is no problem.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

391. Re: Thoughts on RTTY Tx

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-24 17:49:47 UTC
From: Dave
Topic: 387 Message: 391

> The delay in switching the F registers is the same going one way as
> it is going the other, so it simply time shifts the output in
> respect to the input keying signal.

Thanks Steve, I came to that same realization myself. I had
originally figured that I would update the output frequency on evey
pass through the loop, but as you pointed out, it's really only
necessary to update it on the changes between Mark and Space,
eliminating my concern about the sample rate. So, although I
think my original method would work, the hardware change is
unnecessary and control of the frequecy shift can be implemented
fully in software.

Dave

392. Re: [AT_Sprint] ats-3(not A) crystal filter

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-24 18:06:45 UTC
From: David D. Meacham
Topic: 388 Message: 392

Jerry,
It increased the bandwidth.
72, Dave, W6EMD

393. Oops!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-24 18:03:57 UTC
From: David D. Meacham
Topic: 388 Message: 393

Sorry gang. Meant to send that just to Roland.
Dave

394. wants to buy ATS3

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-25 00:47:03 UTC
From: David Sues
Topic: 394 Message: 394

Hello,

If anyone has an ATS3 for sale that is already built
and is working I would be interested in buying it!

Thanks,

David

Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

395. Re: Thoughts on RTTY Tx

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-26 13:04:05 UTC
From: Dave
Topic: 387 Message: 395

My concerns about the sample rate were entirely unfounded. Somehow I had it in my head that the processor clock was running off of the watch crystal when in fact it's running off of the processor's 4-to-5 MHz internal oscillator, about 140 times as fast. That's plenty fast enough to do the frequency switching in software by writing to the DDS registers. Even if I chose to do it by writing 32 bits to change the value in the Tx frequency register, it would only cause about 1/100 of a bit delay, about 1/200 of a bit slower than writing 16 bits.

Dave, WA3OFF

396. ATS-III pic?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-26 16:53:20 UTC
From: David Ek
Topic: 396 Message: 396

Gang,

I'm working on an article (hopefully for publication in a magazine or journal) that, among other things, makes reference to the ATS-III. I could really use a cool picture of an ATS-III packaged in an Altoids tin or some other cool package. Anybody have one that they'd allow me to use (with full credit to source, of course)?

If you have one that you'd allow me to use, just stick it in an email along with any information about the rig that you think would be interesting and a mention of who took the picture so I can credit it properly.

Thanks in advance for anything you might be willing to throw my way. I realize that this Yahoo group has a photos section, but it wouldn't be proper for me to just swipe one without obtaining permission from its source.

Oh, and the reason why I can't take one for myself is that I don't yet own an ATS-III, only a -II... Come the next round, though, watch out!

73 de Dave NK0E

397. Re: [AT_Sprint] ATS-III pic?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-27 02:45:40 UTC
From: Roland Whitsitt
Topic: 396 Message: 397

Dave,
Your welcome to any of my pics but there are far better out there. Still, if your desprate.. help yourself.
Roland n5vwn
----- Original Message -----
From: David Ek
To: AT_Sprint@yahoogroups.com
Sent: Tuesday, September 26, 2006 9:53 AM
Subject: [AT_Sprint] ATS-III pic?

Gang,

I'm working on an article (hopefully for publication in a magazine or journal) that, among other things, makes reference to the ATS-III. I could really use a cool picture of an ATS-III packaged in an Altoids tin or some other cool package. Anybody have one that they'd allow me to use (with full credit to source, of course)?

If you have one that you'd allow me to use, just stick it in an email along with any information about the rig that you think would be interesting and a mention of who took the picture so I can credit it properly.

Thanks in advance for anything you might be willing to throw my way. I realize that this Yahoo group has a photos section, but it wouldn't be proper for me to just swipe one without obtaining permission from its source.

Oh, and the reason why I can't take one for myself is that I don't yet own an ATS-III, only a -II... Come the next round, though, watch out!

73 de Dave NK0E

398. Re: [AT_Sprint] ATS-III pic?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-27 06:26:53 UTC
From: Lutz Bergner
Topic: 396 Message: 398

Hi Dave ,

If you wouldn't mind the german abbreviations on the front you may use mine as well. Look here - there's another one.http://www.qrpforum.de/galerie_data/pics/2242_ats3-1.jpg
The front view is in my picture gallery here. Of course you can get the highres originals if you want.

72s

Lutz, DL2HRP

Am Dienstag, den 26.09.2006, 10:53 -0600 schrieb David Ek:
> Gang,
>
> I'm working on an article (hopefully for publication in a magazine or
> journal) that, among other things, makes reference to the ATS-III. I
> could really use a cool picture of an ATS-III packaged in an Altoids
> tin or some other cool package. Anybody have one that they'd allow me
> to use (with full credit to source, of course)?
>
> If you have one that you'd allow me to use, just stick it in an email
> along with any information about the rig that you think would be
> interesting and a mention of who took the picture so I can credit it
> properly.
>
> Thanks in advance for anything you might be willing to throw my way. I
> realize that this Yahoo group has a photos section, but it wouldn't be
> proper for me to just swipe one without obtaining permission from its
> source.
>
> Oh, and the reason why I can't take one for myself is that I don't yet
> own an ATS-III, only a -II... Come the next round, though, watch out!
>
> 73 de Dave NK0E
>
>
>
>
>
>
--
iXadmin

---
* Systemadministration
* Netzwerkberatung

* Internetdienstleistungen

Tel.: 034922 66717
Fax.: 034922 66718
mobil: 0175 2631032
VOIP(sipgate): 01801 6666260511
Mail: l.bergner@...

399. Re: [AT_Sprint] ATS-III pic?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-27 10:03:07 UTC
From: Gil Stacy
Topic: 396 Message: 399
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

400. Re: ATS-III pic?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-27 13:45:51 UTC
From: David Ek
Topic: 396 Message: 400

Gang,

Got plenty of replies on and off list to my request. I'm probably set at this point. Thanks to all of you for your generosity!

73 de Dave NK0E

401. New housing for ATS-3

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-09-28 21:55:51 UTC
From: John Harper
Topic: 401 Message: 401

From Doug Hauff:

AT Sprint News:

Sept 28, 2006: From Doug Hauff W6AME

"Altoids free!

My new AA-1 Altoids Alternative Enclosure is in work, chips flying! They'll be available at Pacificon! Pull your nice rig/accessory out of that flimsy Altoids tin & plug it into a super durable, high-quality CNC hogout enclosure! Made from 6061-T6 Aircraft Grade aluminum, the AA-1 has a top cover easily rotated open or removed entirely in seconds. The AA-1 is naked and undrilled, ready for your application. Slighty taller and with tighter corner radii than the Altoids tin, the AA-1 will hold anything an Altoids tin will hold & more. AND - it's only twenty bucks! No pics yet, it's still a-building!

Doug Hauff W6AME"

Sounds good to me.
72,

John AE5X
http://www.ae5x.com

402. ATS3A built and for sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-10-07 02:17:51 UTC
From: Glenn Maclean
Topic: 402 Message: 402

I have an ATS3A built in a clear plastic enclosure for sale. Includes all 4 band modules built. Rig works great on all bands! The clear plastic case is large enough to store paddle, band modules, battery pack, and ear bud head phones. I am asking $175.00 plus shipping from 95817 zip. I need the funds for another project.

Thanks,
Glenn WA7SPY

403. ATS3A has been sold

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-10-07 19:38:59 UTC
From: Glenn Maclean
Topic: 403 Message: 403

The ATS3A I had for sale has been sold. Thanks to everyone for your interest.

Glenn WA7SPY

404. Antenna suggestions

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-10-09 14:00:26 UTC
From: Bert Morton
Topic: 404 Message: 404

Having just recently purchased an ATS-3 I'm anxious to use it out in the field and I'm looking for antenna suggestions.

My goal would be to be able to use it on all 4 bands.

I have available a small (pocket size)L network tuner for a random wire and a fairly small MFJ tuner that will support either a random wire or balanced feeder arrangement.

Thanks and 72,

Bert W1DFU

405. Test Please Ignore

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-10-09 14:11:45 UTC
From: Bert Morton
Topic: 405 Message: 405

Test

406. Re: [AT_Sprint] Antenna suggestions

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-10-09 15:37:21 UTC
From: Michael Harnage
Topic: 404 Message: 406

Here is what I generally use in the field.

50'/17' wires gets me on 40/30/20 with a tuner.

a 100'/34' combo adds 80.

I like to get the shorter wires off the ground --
sometimes even parallel to the longer wire but always
off the ground. You will recognize these as 20m and
40m zepps. :) They work fine for me. Again, I use
tuners (generally an Elecraft T1) for best match.

7 3de w1mt
mike

--- Bert Morton <hamradioguy@...> wrote:

> Having just recently purchased an ATS-3 I'm anxious
> to use it out in the
> field and I'm looking for antenna suggestions.
>
> My goal would be to be able to use it on all 4
> bands.
>

Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

407. Antenna suggestions...Thank You !!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-10-10 00:54:36 UTC
From: Bert Morton
Topic: 407 Message: 407

Thank you to everyone that sent me antenna suggestions.

It is appreciated.

I'll report back concerning the experiences I have using them.

73/72

Bert W1DFU

408. Final Run of ATS-3A kits ready for shipment.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-10-12 22:19:23 UTC
From: Bruce Beford
Topic: 408 Message: 408

Steve KD1JV posted this to qrp-l today. All you fence-sitters, wake up.
73,
Bruce N1RX

Date: Thu, 12 Oct 2006 14:30:08 -0400
From: Steven Weber <kd1jv@...>
Subject: [QRP-L] Last run of ATS-3A's
To: qrp-l@mailman.qth.net
Message-ID: <3.0.6.32.20061012143008.00a39a48@...>
Content-Type: text/plain; charset="us-ascii"

Starting Monday, the first batch of the last run of 100 ATS-3A's will start shipping. Web page will be updated to reflect this over the weekend.

What, if anything will come next? Don't know yet. Maybe try for something even smaller?
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

409. Run for the Bacon, 10/15/2006, 6:00 pm

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-10-16 00:42:01 UTC
From: AT_Sprint@yahoogroups.com
Topic: 409 Message: 409

Reminder from the Calendar of AT_Sprint
http://groups.yahoo.com/group/AT_Sprint/cal

Run for the Bacon
Sunday October 15, 2006
6:00 pm - 8:00 pm
(This event repeats on the third Sunday of every month.)
Location: Your shack or anywhere

Notes:
This Sunday evening, the Flying Pigs Amateur Radio Club International
will be holding its monthly Run For The Bacon. This is a friendly,
two hour QRP CW Sprint, which is open to ALL radio amateurs, will last
from 9:00 - 11:00PM EDT (0200-0400 UTC Monday).

You may work stations once per band on 160, 80, 40, 20, 15 or 10
Meters. Suggested starting frequencies are 1.812, 3.562, 7.044,
14.062, 21.062, and 28.062 MHz.

The exchange is RST, S/P/C (State, Province, Country) and Flying Pigs
membership number. If you're not a member of the Flying Pigs, and
would like to be; then please cli

Set up birthday reminders
http://us.rd.yahoo.com/cal_us/rem/?http://groups.yahoo.com/group/AT_Sprint/cal?v=9&evt_typ
e=13

Copyright © 2006 All Rights Reserved
www.yahoo.com

Privacy Policy:
http://privacy.yahoo.com/privacy/us

Terms of Service:
http://docs.yahoo.com/info/terms/

410. New ATS-3a's available?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-10-16 15:11:20 UTC
From: ken_zurawski
Topic: 410 Message: 410

Anyone know if Steve is shipping the new run of 100. Havent seen any updates to the web page over the weekend?
Thanks
Ken
WB9QDL

411. Re: [AT_Sprint] New ATS-3a's available?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-10-16 15:37:54 UTC
From: Karl Larsen
Topic: 410 Message: 411

ken_zurawski wrote:
> Anyone know if Steve is shipping the new run of 100. Havent seen any
> updates to the web page over the weekend?
>
Yes Steve said on QRP-L he is shipping right now. Better get your order
in quick.

73 Karl K5DI

> Thanks
> Ken
> WB9QDL
>
>
>
>
>
> Yahoo! Groups Links
>
>
>
>
>
>
>

412. Output Pwr

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-10-18 05:37:10 UTC
From: Tim Keene
Topic: 412 Message: 412

I have a question for Steve and the group. I have an ATS-3. My pwr out is low on the default qrp freq. On all 4 bands the best output is up approx 200kc. Sometimes this is a considerable increase such as on 20m from 1w on qrp freq to about 3w on 14.200. My question is should I try adding one or possibly 2 windings to the filter board toroids to bring it closer to where it should be? Did I incorrectly count the windings when I made them? Although it is not that big a deal, I would like to get my output pwr closer to where it should be down in the CW band. Any info would be appreciated.

Tim - K5DEZ

413. Re: [AT_Sprint] Output Pwr

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-10-18 11:09:25 UTC
From: Karl Larsen
Topic: 412 Message: 413

Tim Keene wrote:
> I have a question for Steve and the group. I have an ATS-3. My pwr out
> is low on the default qrp freq. On all 4 bands the best output is up
> approx 200kc. Sometimes this is a considerable increase such as on 20m
> from 1w on qrp freq to about 3w on 14.200.
1 or 3 watts are low if your using a 12 volt battery. Did you do the
part of the setup where you move the coils a tiny bit and maximize the
output to about 2.5 watts with a 9 volt battery? You do this on the
frequency the radio comes up, which is like 7.040 MHz?

If you follow the instructions and you can't get even close to 2
Watts with 9 volts on ANY band then there is a problem with the FET
stage. If you get 2 watts on at least one band than it's a tuning
problem with the plugin boards.

Read the Manual :-)

72 Karl K5DI

> My question is should I try
> adding one or possibly 2 windings to the filter board toroids to bring
> it closer to where it should be? Did I incorrectly count the windings
> when I made them? Although it is not that big a deal, I would like to
> get my output pwr closer to where it should be down in the CW band.
> Any info would be appreciated.
>
> Tim - K5DEZ
>
>
>
>
>
> Yahoo! Groups Links
>
>
>
>
>
>
>

414. Re: [AT_Sprint] Output Pwr

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-10-18 13:03:20 UTC
From: Michael Harnage
Topic: 412 Message: 414

Hi Tim,

What power supply are you using? I will assume 9v
given the powers you mention.

In order to get 2.5 watts out I have tweaked 3 of the
4 band modules on most ATS rigs that I have built.
Some have less turns most have more turns. Because of
winding differences among builders, I think most can
be tweaked a little to help with power out. It will
take some experimenting. Be careful though, it is
possible to get TOO much power out. I would not adjust
for more 2.5 watts at 9 volts or 5 watts at 12 volts.
If you know that you will never operate it at more
that 9 volts the go ahead and tweak for peak. :)

On the schematic its LF2 that I had the best luck in
tweaking.

-mike/w1mt

--- Tim Keene <K5DEZ@...> wrote:

> I have a question for Steve and the group. I have an
> ATS-3. My pwr out
> is low on the default qrp freq. On all 4 bands the
> best output is up
> approx 200kc. Sometimes this is a considerable
> increase such as on 20m
> from 1w on qrp freq to about 3w on 14.200. My
> question is should I try
> adding one or possibly 2 windings to the filter
> board toroids to bring
> it closer to where it should be? Did I incorrectly
> count the windings
> when I made them? Although it is not that big a
> deal, I would like to
> get my output pwr closer to where it should be down
> in the CW band.
> Any info would be appreciated.
>
> Tim - K5DEZ
>
>
>
>

>
> Yahoo! Groups Links
>
>
>
>
>
>

Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

415. New file uploaded to AT_Sprint

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-10-18 17:07:37 UTC
From: AT_Sprint@yahoogroups.com
Topic: 154 Message: 415

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the AT_Sprint
group.

File : /My ATS.doc
Uploaded by : w6emdee <W6EMD@...>
Description : ATS-3 Output Low-Pass filter mods

You can access this file at the URL:
http://groups.yahoo.com/group/AT_Sprint/files/My%20ATS.doc

To learn more about file sharing for your group, please visit:
http://help.yahoo.com/help/us/groups/files

Regards,

w6emdee <W6EMD@...>

416. Re: Output Pwr

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-10-18 17:15:09 UTC
From: Dave
Topic: 412 Message: 416

On my ATS-3A, 40M and 20M had output below that of the 80M and 30M modules. Testing the unmodified modules showed peak output at a considerably higher frequency than that of the CW bands, as much a 1MHz higher. On 40M I added 1 turn to L1F, 2 turns to L2F and changed C3F from 100pF to 83pF. That brought power from 3W to 5W using 12V. (I actually played with C3F a bit as saw 7W momentarily, tuning based on http://www.arrl.org/tis/info/pdf/010102qex009.pdf). On 20M I added a turn to LF1, removed a turn from LF2 (made it 14 turns; you would need to add a turn on that toroid of an ATS-3 20M module to get 14 turns) and increased C3F from 33pF to 43pF.

The results from running these values through a filter calculator indicate that these values produce a bit lower input impedence and a better-placed notch at the 2nd harmonic. That assumes that the toroids' permeability specs were correct; I understand that they can vary some. They also seem to line up somewhat better proportionally with the values used on the 80M module.

I found no difference from changing the turns spacing on the toroids. Apparently this mostly changes the inter-turn capacitance. Mine were wound tightly enough that I couldn't really change the spacing that much.

Dave, WA3OFF

417. Re: [AT_Sprint] Output Pwr

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-10-18 19:20:30 UTC
From: David D. Meacham
Topic: 412 Message: 417

Tim,
I uploaded my ATS-3 Low-Pass filter mods to the files section on this group's website. (Yahoo screwed up my callsign, but it's obvious.) Hope they are helpful to you.
72, Dave

418. Output Pwr

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-10-18 20:00:40 UTC
From: Tim Keene
Topic: 412 Message: 418

Tnx for the info and I will give it a try when I am in the mood for experimenting. I'll report back some of my findings if any works out. By the way, I generally use a flat velvet jewelry case with 8 2500maH NiMH AA batteries for my power supply so when fully charged it is around 10-11 volts. I also occasionally use a Planter's Cashew can (I think cashew electrons are better than peanut electrons HI HI) with 6 Hawker Cyclon, 2v, 2.5AH batteries which is a little better than 12v supply. Maybe I will post some pictures later. Tnx agn for the info.

Tim K5DEZ

419. New project in works - base station accessory

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-10-24 18:27:14 UTC
From: Steven Weber
Topic: 412 Message: 419

ATS Gang-

I've just started work on a new accessory for base station use of the ATS rigs. A lot of you have been asking for a digital frequency readout for the rig. I figured if we're gonna do that, might as well throw a few other handy things into it as well. So, it combines a frequency counter, a power/SWR meter, an audio amp, a 6 to11 volt variable voltage regulator and fits into a NorCal BLT box.

I hope to have the prototype up and running in a few days. Then I'll figure out what it will have to sell for. If everything goes well and there are no back ordered parts, could have these ready for sale by the end of November. Sound like something you'd all like to have?

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

420. RE: [AT_Sprint] New project in works - base station accessory

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-10-24 18:50:17 UTC
From: Ron Pfeiffer
Topic: 412 Message: 420

How about an encoder to change the frequency? and space for the NEQRP NESCAF

Ron

421. Re: [AT_Sprint] New project in works - base station accessory

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-10-24 18:51:14 UTC
From: W2AGN
Topic: 412 Message: 421

Steven Weber wrote:

I hope to have the prototype up and running in a few days. Then I'll figure out what it will have to sell for. If everything goes well and there are no back ordered parts, could have these ready for sale by the end of November. Sound like something you'd all like to have?

YES!

--

_ _ _ _ _
/ \ / \ / \ / \ / \ John L. Sielke
(W)(2)(A)(G)(N) http://w2agn.net
_/ _/ _/ _/ _/ http://www.blurty.com/users/w2agn
See the underhanded actions of QRP-ARCI®. http://w2agn.net/noarci.html

422. Re: [AT_Sprint] New project in works - base station accessory

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-10-24 19:43:26 UTC
From: Lee Boulineau
Topic: 412 Message: 422

Steve,

will the freq counter sample the rig output or will
rig mods be needed ???

Lee N4MVL

--- Steven Weber <kd1jv@...> wrote:

> ATS Gang-
>
> I've just started work on a new accessory for base
> station use of the ATS
> rigs. A lot of you have been asking for a digital
> frequency readout for the
> rig. I figured if we're gonna do that, might as well
> throw a few other
> handy things into it as well. So, it combines a
> frequency counter, a
> power/SWR meter, an audio amp, a 6 to11 volt
> variable voltage regulator and
> fits into a NorCal BLT box.
>
> I hope to have the prototype up and running in a few
> days. Then I'll figure
> out what it will have to sell for. If everything
> goes well and there are no
> back ordered parts, could have these ready for sale
> by the end of November.
> Sound like something you'd all like to have?
>
>
>
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://www.qsl.net/kd1jv/
> http://kd1jv.qrpradio.com
>

Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

423. Re: [AT_Sprint] New project in works - base station accessory

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-10-24 19:51:04 UTC
From: Karl Larsen
Topic: 412 Message: 423

Steven Weber wrote:
> ATS Gang-
>
> I've just started work on a new accessory for base station use of the ATS
> rigs. A lot of you have been asking for a digital frequency readout for the
> rig. I figured if we're gonna do that, might as well throw a few other
> handy things into it as well. So, it combines a frequency counter, a
> power/SWR meter, an audio amp, a 6 to11 volt variable voltage regulator and
> fits into a NorCal BLT box.
>
Do we need to order this box ourselves?
> I hope to have the prototype up and running in a few days. Then I'll figure
> out what it will have to sell for. If everything goes well and there are no
> back ordered parts, could have these ready for sale by the end of November.
> Sound like something you'd all like to have?
>
I will order one for sure. Maybe 2.

73 Karl

>
>
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://www.qsl.net/kd1jv/
> http://kd1jv.qrpradio.com
>
>
>
> Yahoo! Groups Links
>
>
>
>
>
>
>
>

424. RE: [AT_Sprint] New project in works - base station accessory

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-10-24 21:14:12 UTC
From: Steven Weber
Topic: 412 Message: 424

Answers to questions so far:

>How about an encoder to change the frequency?

Not practical, for a number of reasons.

>and space for the NEQRP NESCAF
>
Looks like there is room to mount one on the top cover of the BLT box, but not enough room for the controls and in/out switch. I suppose those could be mounted to an "L" bracket mounted to the top of the cover.

>will the freq counter sample the rig output or will
>rig mods be needed ???
>
You will have to add another RCA jack to the side of the ATS tin to sample the DDS output. The counter will automaticlly adjust for the 80M band by determining the LO frequency.

>> fits into a NorCal BLT box.
>>
> Do we need to order this box ourselves?
>
Probably. If I have to buy the boxes and send out to have holes drilled and the display window cut out, it would add considerably to the kit cost and delivery time. There's also a good chance many will opt to package it differently.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

425. Re: [AT_Sprint] New project in works - base station accessory

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-10-24 21:41:55 UTC
From: Karl Larsen
Topic: 412 Message: 425

I will order a box soon. I think the encoder for frequency change
sounds nice and is worth a look.

I don't have a feel for how this will look. Will the ATS be on top
of the box mounted there with screws? That sounds like it must be if we
use the switches as before? There will be a power and DDS output and
audio line running between the box and the ATS, so I will need to think
about this.

Karl K5DI

Steven Weber wrote:
> Answers to questions so far:
>
>
>> How about an encoder to change the frequency?
>>
>
> Not practical, for a number of reasons.
>
>
>> and space for the NEQRP NESCAF
>>
>>
> Looks like there is room to mount one on the top cover of the BLT box, but
> not enough room for the controls and in/out switch. I suppose those could
> be mounted to an "L" bracket mounted to the top of the cover.
>
>
>> will the freq counter sample the rig output or will
>> rig mods be needed ???
>>
>>
> You will have to add another RCA jack to the side of the ATS tin to sample
> the DDS output. The counter will automaticlly adjust for the 80M band by
> determining the LO frequency.
>
>
>>> fits into a NorCal BLT box.
>>>
>>>
>> Do we need to order this box ourselves?
>>
>>
> Probably. If I have to buy the boxes and send out to have holes drilled and
> the display window cut out, it would add considerably to the kit cost and

> delivery time. There's also a good chance many will opt to package it
> differently.
>
>
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://www.qsl.net/kd1jv/
> http://kd1jv.qrpradio.com
>
>
>
> Yahoo! Groups Links
>
>
>
>
>
>
>

426. Re: [AT_Sprint] New project in works - base station accessory

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-10-24 23:11:39 UTC
From: Alan Fryer
Topic: 412 Message: 426
Attachments: 1 described; binary payloads are missing from this source WARC

Yah !!!!

----- Original Message -----
From: Steven Weber
To: AT_Sprint@yahoogroups.com
Sent: Tuesday, October 24, 2006 2:27 PM
Subject: [AT_Sprint] New project in works - base station accessory

ATS Gang-

I've just started work on a new accessory for base station use of the ATS rigs. A lot of you have been asking for a digital frequency readout for the rig. I figured if we're gonna do that, might as well throw a few other handy things into it as well. So, it combines a frequency counter, a power/SWR meter, an audio amp, a 6 to11 volt variable voltage regulator and fits into a NorCal BLT box.

I hope to have the prototype up and running in a few days. Then I'll figure out what it will have to sell for. If everything goes well and there are no back ordered parts, could have these ready for sale by the end of November. Sound like something you'd all like to have?

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

No virus found in this incoming message.
Checked by AVG Free Edition.
Version: 7.1.408 / Virus Database: 268.13.11/493 - Release Date: 10/23/2006

427. Re: [AT_Sprint] New project in works - base station accessory

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-10-24 23:50:55 UTC
From: rbrown0831@aol.com
Topic: 412 Message: 427

Absolutely, I'm ready to sign up.

Ron Brown
N3CAZ

In a message dated 10/24/2006 2:36:23 PM Eastern Daylight Time,
kd1jv@... writes:
ATS Gang-

I've just started work on a new accessory for base station use of the ATS rigs. A lot of you have been asking for a digital frequency readout for the rig. I figured if we're gonna do that, might as well throw a few other handy things into it as well. So, it combines a frequency counter, a power/SWR meter, an audio amp, a 6 to11 volt variable voltage regulator and fits into a NorCal BLT box.

I hope to have the prototype up and running in a few days. Then I'll figure out what it will have to sell for. If everything goes well and there are no back ordered parts, could have these ready for sale by the end of November. Sound like something you'd all like to have?

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

428. Re: New project in works - base station accessory

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-10-25 10:01:03 UTC
From: Bruce Beford
Topic: 412 Message: 428

I'll buy one or two, Steve. Keep in mind, however that Doug has stopped offering the BLT cases seperately. Perhaps, you could convince him to change his mind?.....

-Bruce N1RX

429. Re: [AT_Sprint] New project in works - base station accessory

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-10-25 10:31:16 UTC
From: Alan Fryer
Topic: 412 Message: 429
Attachments: 1 described; binary payloads are missing from this source WARC

I was excited about the once proposed ATS-4, wanting a base station version of the ATS-3. Now that Steve is offering this option, I'll mount an ATS-3 board and the new board in a single enclosure and have a very nice, small table top rig !

Alan, N3BJ

----- Original Message -----
From: Steven Weber
To: AT_Sprint@yahoogroups.com
Sent: Tuesday, October 24, 2006 5:14 PM
Subject: RE: [AT_Sprint] New project in works - base station accessory

Answers to questions so far:

>How about an encoder to change the frequency?

Not practical, for a number of reasons.

>and space for the NEQRP NESCAF
>
Looks like there is room to mount one on the top cover of the BLT box, but not enough room for the controls and in/out switch. I suppose those could be mounted to an "L" bracket mounted to the top of the cover.

>will the freq counter sample the rig output or will
>rig mods be needed ???
>
You will have to add another RCA jack to the side of the ATS tin to sample the DDS output. The counter will automaticlly adjust for the 80M band by determining the LO frequency.

>> fits into a NorCal BLT box.
>>
> Do we need to order this box ourselves?
>
Probably. If I have to buy the boxes and send out to have holes drilled and the display window cut out, it would add considerably to the kit cost and delivery time. There's also a good chance many will opt to package it differently.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

No virus found in this incoming message.
Checked by AVG Free Edition.
Version: 7.1.408 / Virus Database: 268.13.11/493 - Release Date: 10/23/2006

430. Re: New project in works - base station accessory

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-10-25 13:50:37 UTC
From: pdouglas12@aol.com
Topic: 412 Message: 430

I'm in, Steve. Thanks.

Preston WJ2V

431. Re: [AT_Sprint] Re: New project in works - base station accessory

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-10-25 21:23:48 UTC
From: Steven Weber
Topic: 412 Message: 431

>however that Doug has stopped offering the BLT cases seperately.Perhaps,
you could convince him to change
>his mind?.....

Err, bummer. I love the size and shape of the BLT case. Might have to
rethink how to package this thing. Oh well, one problem at a time, gotta
make it work first...

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

432. Re: [AT_Sprint] Re: New project in works - base station accessory

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-10-26 05:38:12 UTC
From: w9ya@arrl.net
Topic: 412 Message: 432

How about using TWO altoid cases stacked on top of one another like the
NoGA Wattmeter ?

Vy 72;

Bob
w9ya

>>however that Doug has stopped offering the BLT cases
>> seperately.Perhaps,
> you could convince him to change
>>his mind?.....
>
> Err, bummer. I love the size and shape of the BLT case. Might have to
> rethink how to package this thing. Oh well, one problem at a time, gotta
> make it work first...
>
>
> 72,
> Steve, KD1JV
> "Melt Solder"

433. Re: New project in works - base station accessory

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-10-26 11:32:15 UTC
From: Ann
Topic: 412 Message: 433

Steve.....
YES YES YES...Please count me in!!!!
Sounds VERY neat!!!!! Forget Prada, Versace, Dior and
Lauren...this YL has more fun with KD1JV designs!!!!
Thanks for being so far ahead of your time and being such a
genius!!!
I'm in!!!
72 es 88
Ann
AB1DR

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
>
> ATS Gang-
>
> I've just started work on a new accessory for base station use of
the ATS
> rigs. A lot of you have been asking for a digital frequency readout
for the
> rig. I figured if we're gonna do that, might as well throw a few other
> handy things into it as well. So, it combines a frequency counter, a
> power/SWR meter, an audio amp, a 6 to11 volt variable voltage
regulator and
> fits into a NorCal BLT box.
>
> I hope to have the prototype up and running in a few days. Then I'll
figure
> out what it will have to sell for. If everything goes well and there
are no
> back ordered parts, could have these ready for sale by the end of
November.
> Sound like something you'd all like to have?
>
>
>
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://www.qsl.net/kd1jv/
> http://kd1jv.qrpradio.com
>

434. Re: New project in works - base station accessory

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-10-26 22:57:44 UTC
From: aarhus_ca
Topic: 412 Message: 434

Hi Steve

Just to make sure that you DO understand that there is pent-up demand :-)

I'm in

John VE3NFK

PS - it is an awesome little radio with the SteppIR antenna:
DL6TQ 400W VE3NFK 3W plus others

> --- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@> wrote:
> >
> > ATS Gang-
> >
> > I've just started work on a new accessory for base station use of
> the ATS
> > rigs. A lot of you have been asking for a digital frequency readout
> for the
> > rig. I figured if we're gonna do that, might as well throw a few other
> > handy things into it as well. So, it combines a frequency counter, a
> > power/SWR meter, an audio amp, a 6 to11 volt variable voltage
> regulator and
> > fits into a NorCal BLT box.
> >
> > I hope to have the prototype up and running in a few days. Then I'll
> figure
> > out what it will have to sell for. If everything goes well and there
> are no
> > back ordered parts, could have these ready for sale by the end of
> November.
> > Sound like something you'd all like to have?
> >
> >
> >
> > 72,
> > Steve, KD1JV
> > "Melt Solder"
> > White Mountains of New Hampshire
> > http://www.qsl.net/kd1jv/
> > http://kd1jv.qrpradio.com
> >
>

435. Re: [AT_Sprint] Re: New project in works - base station accessory

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-10-26 23:20:40 UTC
From: Gil Stacy
Topic: 412 Message: 435
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

436. Direct frequency entry ATS 3

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-10-27 01:26:37 UTC
From: Bert Morton
Topic: 436 Message: 436

I have noticed that when using direct frequency entry with my ATS3 it comes out a tad high. As an example when I enter 3566 I end up being on 3566.3. When I power up the default frequency is right on at 3560.

Is this normal ?

72,

Bert W1DFU

437. Re: [AT_Sprint] Direct frequency entry ATS 3

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-10-27 15:20:12 UTC
From: Steven Weber
Topic: 436 Message: 437

>I have noticed that when using direct frequency entry with my ATS3 it comes
>out a tad high. As an example when I enter 3566 I end up being on 3566.3.
>When I power up the default frequency is right on at 3560.
>
Bert,

If you have one of the first batches of ATS-3's, DFE mode added (or subtracted) 50 Hz steps to get to the new frequency. Unfortunetly, the 50 Hz step isn't quite exactly 50 Hz, and when added together a fairly large number of times, the fractional error becomes noticable.

This problem was solved by calculating the proper DDS phase word each time the frequency is changed, rather than adding frequency steps to a base frequency word.

If you like, you can send the rig to me for firmware upgrade, which will fix that problem and a few other minor bugs you might not have noticed, plus add new features like the XIT tuning and three keyer memories.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

438. Re: [AT_Sprint] Re: New project in works - base station accessory

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-10-27 15:32:11 UTC
From: Steven Weber
Topic: 412 Message: 438

>How about using TWO altoid cases stacked on top of one another like the
>NoGA Wattmeter ?
>
That crossed my mind, but there would be some tricky mechanical issues
doing that. I wish they still made those little 1/4" led displays they used
to use in early calculators!

It looks like the BUD "converta boxes" will do the trick. The smallest is
3" X 4" X 1.5", about the same size as the BLT case, but an inch longer or
wider, depending on how you look at it. And I could really use that extra
inch. They also come in larger sizes, if someone wanted to put more stuff
into the same box.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

439. Re: [AT_Sprint] Direct frequency entry ATS 3

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-10-27 15:46:01 UTC
From: Bert Morton
Topic: 436 Message: 439

Hi Steve,

You recently had this particular rig in for service. It's the rig I bought from Monty N5ESE.

It's not a troublesome situation by any means at the moment, but I'll send it over at some point for you to look at.

I'm the guy that came over to the picnic table at hosstraders to thank you personally for squaring the rig away after I got it from Monty.

72,

Bert
----- Original Message -----
From: "Steven Weber" <kd1jv@...>
To: <AT_Sprint@yahoogroups.com>
Sent: Friday, October 27, 2006 11:20 AM
Subject: Re: [AT_Sprint] Direct frequency entry ATS 3

> >I have noticed that when using direct frequency entry with my ATS3 it
> >comes
>>out a tad high. As an example when I enter 3566 I end up being on 3566.3.
>>When I power up the default frequency is right on at 3560.
>>
> Bert,
>
> If you have one of the first batches of ATS-3's, DFE mode added (or
> subtracted) 50 Hz steps to get to the new frequency. Unfortunetly, the 50
> Hz step isn't quite exactly 50 Hz, and when added together a fairly large
> number of times, the fractional error becomes noticable.
>
> This problem was solved by calculating the proper DDS phase word each time
> the frequency is changed, rather than adding frequency steps to a base
> frequency word.
>
> If you like, you can send the rig to me for firmware upgrade, which will
> fix that problem and a few other minor bugs you might not have noticed,
> plus add new features like the XIT tuning and three keyer memories.
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://www.qsl.net/kd1jv/
> http://kd1jv.qrpradio.com
>

>
>
> Yahoo! Groups Links
>
>
>
>
>
>
> --
> No virus found in this incoming message.
> Checked by AVG Free Edition.
> Version: 7.5.428 / Virus Database: 268.13.16/504 - Release Date:
> 10/27/2006 9:20 AM
>
>

440. Re: [AT_Sprint] Re: New project in works - base station accessory

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-10-27 16:43:30 UTC
From: Mark Brueggemann
Topic: 412 Message: 440

--- Steven Weber <kd1jv@...> wrote:

> I wish they still made those little 1/4" led displays
> they used to use in early calculators!

You can get 7mm (~.3"), 7 segment LED's from Digi-Key
e.g: LTD-2701G-ND

Mark K5LXP
Albuquerque, NM

441. Re: [AT_Sprint] Re: New project in works - base station accessory

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-10-27 21:49:15 UTC
From: Steven Weber
Topic: 412 Message: 441

>> I wish they still made those little 1/4" led displays
>> they used to use in early calculators!
>
>You can get 7mm (~.3"), 7 segment LED's from Digi-Key
>e.g: LTD-2701G-ND
>
Yeah, but I belive thier in a .5" high and .4" wide package. No space
savings there. I'd like to find the kind where four digits fit into a 14
pin DIP socket and have the maginfying lens on them.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

442. Re: [AT_Sprint] Re: New project in works - base station accessory

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-10-27 22:23:37 UTC
From: Mark Brueggemann
Topic: 412 Message: 442

--- Steven Weber <kd1jv@...> wrote:

> Yeah, but I belive thier in a .5" high and .4" wide package.

You're right.

> I'd like to find the kind where four digits fit into a
> 14 pin DIP socket and have the maginfying lens on them.

I remember those. Come to think of it, it has been a long time
since I've seen a small segmented LED display.

Mark K5LXP
Albuquerque, NM

443. ATS-3A springs to life

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-10-30 20:37:45 UTC
From: Thomas Kuehl
Topic: 443 Message: 443

Hi group,

About 1 1/2 weeks ago I received my ATS-3A kit from Steve. Having but an hour so a day available to work on the kit, I finished the board assembly this past Saturday evening. I had enough time to start going through the check-out and calibration that night. Much to my surprise and joy everything went perfectly.

Yesterday, I started drilling on the Altoids tin that I had sprayed with a few coats of light gray paint during the evenings of the prior week. I didn't get started with the drilling until about 2:30PM. Although most of the drilling went pretty well, figuring out how to fit a female BNC on the tin proved to be a time consuming task. But now the ATS-3A has a nice BNC connector in place.

Then last evening, about 6:30 PM I connected an antenna and on 40 meters heard the first signals. Switching to the dummy load and pressing the key produced RF output. After a bit of receiver tweaking I put it on the air and called CQ. K7NM, near SLC came back. We had a great path and he told me at times I was 589. Certainly his 40-10 meter log periodic didn't hinder my signal.

This morning, I hooked the ATS-3A up to some equipment here in my lab at work. Although I have the exact numbers, the approximate output power is 1 to 1.2W at 6V, 2.3 to 2.8W at 9V, and 4.0 to 4.7W with 12V. That of course depends on the band. Interestingly, with my 12.2V switching supply the power is between 4.5 and 5.0W, on the lower 3 bands. Point 2 volts makes a big difference, but I have to watch the supply voltage doesn't get too high.

I must say that building the ATS-3A is quite challenging and required more mental involvement than building my K1 or K2. Don't get me wrong, I really like my Elecrafts. It is just building this radio seemed like a lot more work!

The ATS-3A will be part of my set up while I am operating from Germany from November 13th through the 17th. Maybe my little signal will make it back across the pond.

'73, Thomas - AC7A (Tucson)

Get your email and see which of your friends are online - Right on the new Yahoo.com

444. Re: [AT_Sprint] ATS-3A springs to life

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-10-30 23:19:46 UTC
From: BPCI@aol.com
Topic: 443 Message: 444

In a message dated 10/30/2006 1:48:34 PM Mountain Standard Time,
qrp_op@... writes:

I must say that building the ATS-3A is quite challenging and required more
mental involvement than building my K1 or K2. Don't get me wrong, I really
like my Elecrafts. It is just building this radio seemed like a lot more work!

I agree Thomas. I just started on miy kit over the weekend, and I am jsut
about finished with the main board. Of course, I don't know if it works, but it
has been a different experience than building the K-2/100 and the KX-1. I am
really enjoying it but am missing R-1 and a capacitor for the 40 meter board.
My SMD experience is minimal, but it is a challenge and a lot of fun. Steven
deserves a medal for all his work in this regard....73, Ci

Ci Jones, WU7R
FISTS #10789, CC #1853
NAQCC #306
ARCI #12163
SKCC #22, C#38
FP #1442

445. Re: [AT_Sprint] ATS-3A springs to life

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-10-31 00:03:19 UTC
From: Karl Larsen
Topic: 443 Message: 445

BPCI@... wrote:
> In a message dated 10/30/2006 1:48:34 PM Mountain Standard Time,
> qrp_op@... writes:
>
> I must say that building the ATS-3A is quite challenging and
> required more mental involvement than building my K1 or K2. Don't
> get me wrong, I really like my Elecrafts. It is just building this
> radio seemed like a lot more work!
>
> I agree Thomas. I just started on miy kit over the weekend, and I am
> jsut about finished with the main board. Of course, I don't know if it
> works, but it has been a different experience than building the
> K-2/100 and the KX-1. I am really enjoying it but am missing R-1 and a
> capacitor for the 40 meter board. My SMD experience is minimal, but it
> is a challenge and a lot of fun. Steven deserves a medal for all his
> work in this regard....73, Ci
>
> Ci Jones, WU7R
> FISTS #10789, CC #1853
> NAQCC #306
> ARCI #12163
> SKCC #22, C#38
> FP #1442
>
You both are to be given a real thrill when you discover the little
radio receives so WELL. I know I was just amazed when I listened to
first my FT-817 and then the ats-3 and not often but EVERY time the
signal on the ats-3 was louder and more clear. The Signal + Noise/Noise
ratio was much better on the ats-3. Thomas be sure to test your ats3a
over in Germany on 40 meters where the loud broadcast stations are. My
ast-3 has serious problems with them as does the 2n2-40 receiver.

Thomas your going to have a lot of fun over there. I wish I could
get my 85 feet of wire and a T1 tuner to you. I use this antenna end fed
at my daughters hospital and get out real well. But she is at 9700 feet
so that helps more perhaps :-)

72 73 Karl K5DI

446. Re: [AT_Sprint] ATS-3A springs to life

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-10-31 16:39:46 UTC
From: Thomas Kuehl
Topic: 443 Message: 446

Hi Karl,

The ATS-3A has the 2-section front-end filter on 40 and 30 meters. I used even lighter coupling between sections on my 40 meter filter to increase the filter Q (1pF in place of the 2.2pF coupling cap). This morning I was listening on 40 meters and thought I might be hearing some SWL related overload, but because of the narrow filter I am not sure what it was.

I am not accustomed to using a receiver with a narrow IF filter. Normally, I use the widest filter that the conditions permit. So the band seems quiet (dead) until I come across a strong station. Sometimes these stations are so strong I use the volume control in my headphones to reduce the level. It seems like I don't I don't hear many weak signals. That may just be an aberration associated with having an IF bandwidth of a few hundred Hertz.

When I get back from this long trip, I'll compare the ATS-3A to my K1, which has a similar receiver design. It will be an interesting comparison.

'73, Thomas - AC7A

Karl Larsen <k5di@...> wrote:
BPCI@... wrote:
> In a message dated 10/30/2006 1:48:34 PM Mountain Standard Time,
> qrp_op@... writes:
>
> I must say that building the ATS-3A is quite challenging and
> required more mental involvement than building my K1 or K2. Don't
> get me wrong, I really like my Elecrafts. It is just building this
> radio seemed like a lot more work!
>
> I agree Thomas. I just started on miy kit over the weekend, and I am
> jsut about finished with the main board. Of course, I don't know if it
> works, but it has been a different experience than building the
> K-2/100 and the KX-1. I am really enjoying it but am missing R-1 and a
> capacitor for the 40 meter board. My SMD experience is minimal, but it
> is a challenge and a lot of fun. Steven deserves a medal for all his
> work in this regard....73, Ci
>
> Ci Jones, WU7R
> FISTS #10789, CC #1853
> NAQCC #306
> ARCI #12163
> SKCC #22, C#38
> FP #1442
>
You both are to be given a real thrill when you discover the little
radio receives so WELL. I know I was just amazed when I listened to

first my FT-817 and then the ats-3 and not often but EVERY time the signal on the ats-3 was louder and more clear. The Signal + Noise/Noise ratio was much better on the ats-3. Thomas be sure to test your ats3a over in Germany on 40 meters where the loud broadcast stations are. My ast-3 has serious problems with them as does the 2n2-40 receiver.

Thomas your going to have a lot of fun over there. I wish I could get my 85 feet of wire and a T1 tuner to you. I use this antenna end fed at my daughters hospital and get out real well. But she is at 9700 feet so that helps more perhaps :-)

72 73 Karl K5DI

Get your email and see which of your friends are online - Right on the new Yahoo.com

447. Re: [AT_Sprint] ATS-3A springs to life

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-10-31 17:09:49 UTC
From: Karl Larsen
Topic: 443 Message: 447

Thomas Kuehl wrote:
> Hi Karl,
>
> The ATS-3A has the 2-section front-end filter on 40 and 30 meters.
> I used even lighter coupling between sections on my 40 meter filter to
> increase the filter Q (1pF in place of the 2.2pF coupling cap). This
> morning I was listening on 40 meters and thought I might be hearing
> some SWL related overload, but because of the narrow filter I am not
> sure what it was.
It could be some 8 MHz skip that is real-loud. But I have never
heard voices around 7.040 except the Mexican SSB stations who are right
on frequency :-)
>
> I am not accustomed to using a receiver with a narrow IF filter.
> Normally, I use the widest filter that the conditions permit. So the
> band seems quiet (dead) until I come across a strong station.
> Sometimes these stations are so strong I use the volume control in my
> headphones to reduce the level.
Sounds like your using the Coby earphones I love.
> It seems like I don't I don't hear many weak signals. That may just be
> an aberration associated with having an IF bandwidth of a few hundred
> Hertz.
Yes and think how nice that will be when your a Fox. You can sure
spread them out and work the loud ones first and then the rest.
>
> When I get back from this long trip, I'll compare the ATS-3A to my K1,
> which has a similar receiver design. It will be an interesting
> comparison.
>
Yes you will see some differences but they both use the same IF that
is related to the crystals that are so common in computers they are real
cheap.
> '73, Thomas - AC7A
>
>
> 72 73 Karl K5DI

> */Karl Larsen <k5di@...>/* wrote:
>
> BPCI@... <mailto:BPCI%40aol.com> wrote:
> > In a message dated 10/30/2006 1:48:34 PM Mountain Standard Time,
> > qrp_op@... <mailto:qrp_op%40yahoo.com> writes:
> >
> > I must say that building the ATS-3A is quite challenging and
> > required more mental involvement than building my K1 or K2. Don't

> > get me wrong, I really like my Elecrafts. It is just building this
> > radio seemed like a lot more work!
> >
> > I agree Thomas. I just started on miy kit over the weekend, and
> I am
> > jsut about finished with the main board. Of course, I don't know
> if it
> > works, but it has been a different experience than building the
> > K-2/100 and the KX-1. I am really enjoying it but am missing R-1
> and a
> > capacitor for the 40 meter board. My SMD experience is minimal,
> but it
> > is a challenge and a lot of fun. Steven deserves a medal for all
> his
> > work in this regard....73, Ci
> >
> > Ci Jones, WU7R
> > FISTS #10789, CC #1853
> > NAQCC #306
> > ARCI #12163
> > SKCC #22, C#38
> > FP #1442
> >
> You both are to be given a real thrill when you discover the little
> radio receives so WELL. I know I was just amazed when I listened to
> first my FT-817 and then the ats-3 and not often but EVERY time the
> signal on the ats-3 was louder and more clear. The Signal +
> Noise/Noise
> ratio was much better on the ats-3. Thomas be sure to test your ats3a
> over in Germany on 40 meters where the loud broadcast stations
> are. My
> ast-3 has serious problems with them as does the 2n2-40 receiver.
>
> Thomas your going to have a lot of fun over there. I wish I could
> get my 85 feet of wire and a T1 tuner to you. I use this antenna
> end fed
> at my daughters hospital and get out real well. But she is at 9700
> feet
> so that helps more perhaps :-)
>
> 72 73 Karl K5DI
>
>
> ---
> Get your email and see which of your friends are online - Right on the
> new Yahoo.com
> <http://us.rd.yahoo.com/evt=42973/*http://www.yahoo.com/preview>
>

448. Re: [AT_Sprint] ATS-3A springs to life

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-10-31 17:41:16 UTC
From: Roland Whitsitt
Topic: 443 Message: 448

I'm not positive, but I've been hearing stuff on 40 meters at night around 3 am to dawn here in California. I'm thinking it's over the horizon radar. Yep, on 40 meters. It's not all Ghz stuff. It's all over the cw portion. We also get a lot of JA's ssb too, all over the 40 meter band from 7.035 on up to 7.100. Always loud in Ca.
Roland N5VWN/6
----- Original Message -----
From: Karl Larsen
To: AT_Sprint@yahoogroups.com
Sent: Tuesday, October 31, 2006 9:09 AM
Subject: Re: [AT_Sprint] ATS-3A springs to life

Thomas Kuehl wrote:
> Hi Karl,
>
> The ATS-3A has the 2-section front-end filter on 40 and 30 meters.
> I used even lighter coupling between sections on my 40 meter filter to
> increase the filter Q (1pF in place of the 2.2pF coupling cap). This
> morning I was listening on 40 meters and thought I might be hearing
> some SWL related overload, but because of the narrow filter I am not
> sure what it was.
It could be some 8 MHz skip that is real-loud. But I have never
heard voices around 7.040 except the Mexican SSB stations who are right
on frequency :-)
>
> I am not accustomed to using a receiver with a narrow IF filter.
> Normally, I use the widest filter that the conditions permit. So the
> band seems quiet (dead) until I come across a strong station.
> Sometimes these stations are so strong I use the volume control in my
> headphones to reduce the level.
Sounds like your using the Coby earphones I love.
> It seems like I don't I don't hear many weak signals. That may just be
> an aberration associated with having an IF bandwidth of a few hundred
> Hertz.
Yes and think how nice that will be when your a Fox. You can sure
spread them out and work the loud ones first and then the rest.
>
> When I get back from this long trip, I'll compare the ATS-3A to my K1,
> which has a similar receiver design. It will be an interesting
> comparison.
>
Yes you will see some differences but they both use the same IF that
is related to the crystals that are so common in computers they are real
cheap.
> '73, Thomas - AC7A
>

>
> 72 73 Karl K5DI

> */Karl Larsen <k5di@...>/* wrote:
>
> BPCI@... <mailto:BPCI%40aol.com> wrote:
> > In a message dated 10/30/2006 1:48:34 PM Mountain Standard Time,
> > qrp_op@... <mailto:qrp_op%40yahoo.com> writes:
> >
> > I must say that building the ATS-3A is quite challenging and
> > required more mental involvement than building my K1 or K2. Don't
> > get me wrong, I really like my Elecrafts. It is just building this
> > radio seemed like a lot more work!
> >
> > I agree Thomas. I just started on miy kit over the weekend, and
> I am
> > jsut about finished with the main board. Of course, I don't know
> if it
> > works, but it has been a different experience than building the
> > K-2/100 and the KX-1. I am really enjoying it but am missing R-1
> and a
> > capacitor for the 40 meter board. My SMD experience is minimal,
> but it
> > is a challenge and a lot of fun. Steven deserves a medal for all
> his
> > work in this regard....73, Ci
> >
> > Ci Jones, WU7R
> > FISTS #10789, CC #1853
> > NAQCC #306
> > ARCI #12163
> > SKCC #22, C#38
> > FP #1442
> >
> You both are to be given a real thrill when you discover the little
> radio receives so WELL. I know I was just amazed when I listened to
> first my FT-817 and then the ats-3 and not often but EVERY time the
> signal on the ats-3 was louder and more clear. The Signal +
> Noise/Noise
> ratio was much better on the ats-3. Thomas be sure to test your ats3a
> over in Germany on 40 meters where the loud broadcast stations
> are. My
> ast-3 has serious problems with them as does the 2n2-40 receiver.
>
> Thomas your going to have a lot of fun over there. I wish I could
> get my 85 feet of wire and a T1 tuner to you. I use this antenna
> end fed
> at my daughters hospital and get out real well. But she is at 9700
> feet
> so that helps more perhaps :-)

>
> 72 73 Karl K5DI
>
>
> ---
> Get your email and see which of your friends are online - Right on the
> new Yahoo.com
> <http://us.rd.yahoo.com/evt=42973/*http://www.yahoo.com/preview>
>

449. Re: [AT_Sprint] ATS-3A springs to life

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-10-31 17:46:07 UTC
From: Roland Whitsitt
Topic: 443 Message: 449

Oh yeah, forgot to mention all those Russian 40 meter beacons right around 7.040...loudest of all!
Roland N5VWN
----- Original Message -----
From: Roland Whitsitt
To: AT_Sprint@yahoogroups.com
Sent: Tuesday, October 31, 2006 9:41 AM
Subject: Re: [AT_Sprint] ATS-3A springs to life

I'm not positive, but I've been hearing stuff on 40 meters at night around 3 am to dawn here in California. I'm thinking it's over the horizon radar. Yep, on 40 meters. It's not all Ghz stuff. It's all over the cw portion. We also get a lot of JA's ssb too, all over the 40 meter band from 7.035 on up to 7.100. Always loud in Ca.
Roland N5VWN/6
----- Original Message -----
From: Karl Larsen
To: AT_Sprint@yahoogroups.com
Sent: Tuesday, October 31, 2006 9:09 AM
Subject: Re: [AT_Sprint] ATS-3A springs to life

Thomas Kuehl wrote:
> Hi Karl,
>
> The ATS-3A has the 2-section front-end filter on 40 and 30 meters.
> I used even lighter coupling between sections on my 40 meter filter to
> increase the filter Q (1pF in place of the 2.2pF coupling cap). This
> morning I was listening on 40 meters and thought I might be hearing
> some SWL related overload, but because of the narrow filter I am not
> sure what it was.
It could be some 8 MHz skip that is real-loud. But I have never
heard voices around 7.040 except the Mexican SSB stations who are right
on frequency :-)
>
> I am not accustomed to using a receiver with a narrow IF filter.
> Normally, I use the widest filter that the conditions permit. So the
> band seems quiet (dead) until I come across a strong station.
> Sometimes these stations are so strong I use the volume control in my
> headphones to reduce the level.
Sounds like your using the Coby earphones I love.
> It seems like I don't I don't hear many weak signals. That may just be
> an aberration associated with having an IF bandwidth of a few hundred
> Hertz.
Yes and think how nice that will be when your a Fox. You can sure
spread them out and work the loud ones first and then the rest.
>

> When I get back from this long trip, I'll compare the ATS-3A to my K1,
> which has a similar receiver design. It will be an interesting
> comparison.
>
Yes you will see some differences but they both use the same IF that
is related to the crystals that are so common in computers they are real
cheap.
> '73, Thomas - AC7A
>
>
> 72 73 Karl K5DI

> */Karl Larsen <k5di@...>/* wrote:
>
> BPCI@... <mailto:BPCI%40aol.com> wrote:
> > In a message dated 10/30/2006 1:48:34 PM Mountain Standard Time,
> > qrp_op@... <mailto:qrp_op%40yahoo.com> writes:
> >
> > I must say that building the ATS-3A is quite challenging and
> > required more mental involvement than building my K1 or K2. Don't
> > get me wrong, I really like my Elecrafts. It is just building this
> > radio seemed like a lot more work!
> >
> > I agree Thomas. I just started on miy kit over the weekend, and
> I am
> > jsut about finished with the main board. Of course, I don't know
> if it
> > works, but it has been a different experience than building the
> > K-2/100 and the KX-1. I am really enjoying it but am missing R-1
> and a
> > capacitor for the 40 meter board. My SMD experience is minimal,
> but it
> > is a challenge and a lot of fun. Steven deserves a medal for all
> his
> > work in this regard....73, Ci
> >
> > Ci Jones, WU7R
> > FISTS #10789, CC #1853
> > NAQCC #306
> > ARCI #12163
> > SKCC #22, C#38
> > FP #1442
> >
> You both are to be given a real thrill when you discover the little
> radio receives so WELL. I know I was just amazed when I listened to
> first my FT-817 and then the ats-3 and not often but EVERY time the
> signal on the ats-3 was louder and more clear. The Signal +
> Noise/Noise
> ratio was much better on the ats-3. Thomas be sure to test your ats3a
> over in Germany on 40 meters where the loud broadcast stations

> are. My
> ast-3 has serious problems with them as does the 2n2-40 receiver.
>
> Thomas your going to have a lot of fun over there. I wish I could
> get my 85 feet of wire and a T1 tuner to you. I use this antenna
> end fed
> at my daughters hospital and get out real well. But she is at 9700
> feet
> so that helps more perhaps :-)
>
> 72 73 Karl K5DI
>
>
> ---
> Get your email and see which of your friends are online - Right on the
> new Yahoo.com
> <http://us.rd.yahoo.com/evt=42973/*http://www.yahoo.com/preview>
>

450. Aluminum ("aluminium" for you G-landers) enclosure for Sprint - anyone have one?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-10-31 20:53:37 UTC
From: John Harper
Topic: 450 Message: 450

Has anyone installed their ATS in this housing:

http://www.americanmorse.com/aa1.htm

If so, I'd be interested to hear how you like it and how convenient it
is (or isn't) to open it to change band modules.

Thanks,

John AE5X
http://www.ae5x.com

451. Re: [AT_Sprint] Aluminum ("aluminium" for you G-landers) enclosure for Sprint - anyone have one?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-01 15:52:26 UTC
From: Michael Harnage
Topic: 450 Message: 451

I have been looking at those boxes too and may get a
couple to try out. Looks like you might have to move
the buttons to the other side of the board and open
the box from the top. I don't like protruding screws
on the bottom of my rigs. :)

Also, it looks like the boxes are not finished. I was
hoping for some kind of anodizing but that would
undoubtably cost even more.

Anyone tried one yet?

73 de w1mt
mike

--- John Harper <ae5x@...> wrote:

> Has anyone installed their ATS in this housing:
>
> http://www.americanmorse.com/aa1.htm
>
>

Low, Low, Low Rates! Check out Yahoo! Messenger's cheap PC-to-Phone call rates
(http://voice.yahoo.com)

452. Re: [AT_Sprint] Aluminum ("aluminium" for you G-landers) enclosure for Sprint - anyone have one?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-01 16:12:09 UTC
From: Gil Stacy
Topic: 450 Message: 452
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

453. Re: [AT_Sprint] Aluminum ("aluminium" for you G-landers) enclosure for Sprint...

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-01 16:41:50 UTC
From: BPCI@aol.com
Topic: 453 Message: 453

In a message dated 11/1/2006 8:57:01 AM Mountain Standard Time,
w1mt@... writes:

Anyone tried one yet?

I just ordered one...

Ci Jones, WU7R
FISTS #10789, CC #1853
NAQCC #306
ARCI #12163
SKCC #22, C#38
FP #1442

454. ATS 3A First QSO

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-03 15:06:13 UTC
From: Ci
Topic: 454 Message: 454

I just finished my ATS-3A and had a QSO with AC2C in Maryland (not bad from Montana)on 20 Meters. At first I had a "Whoop" when keying the transmitter, but was able to adjust it out using the on-board cap. Now I find my 40 meter board has the same whoop so I will continue troubleshooting that filter. Any suggestions would be appreciated. What a neat little radio this is...Ci

455. Re: [AT_Sprint] ATS 3A First QSO

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-03 15:11:23 UTC
From: Terry WA0ITP
Topic: 454 Message: 455

Congratrulations Ci!!

72 73
Terry, WAØITP
www.wa0dx.org/wa0itp
www.4sqrp.com

----- Original Message -----
From: Ci
To: AT_Sprint@yahoogroups.com
Sent: Friday, November 03, 2006 9:06 AM
Subject: [AT_Sprint] ATS 3A First QSO

I just finished my ATS-3A and had a QSO with AC2C in Maryland (not bad from Montana)on 20 Meters. At first I had a "Whoop" when keying the transmitter, but was able to adjust it out using the on-board cap. Now I find my 40 meter board has the same whoop so I will continue troubleshooting that filter. Any suggestions would be appreciated. What a neat little radio this is...Ci

---

No virus found in this incoming message.
Checked by AVG Free Edition.
Version: 7.1.409 / Virus Database: 268.13.25/515 - Release Date: 11/3/2006

456. Re: [AT_Sprint] ATS 3A First QSO

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-03 15:23:17 UTC
From: Michael Harnage
Topic: 454 Message: 456

Nice job Ci,

If it is from the first 3A batch make sure that you
have a larger cap in place for C54. (Search the
message on the group for a discussion on that).

Also, make sure that you have a stout power supply. I
see similiar results when using a battery that just
does not have much juice left. Will work fine for rx
but when you go to tx it just can't handle it. 8xAA
works FB in most cases. Those 9v rectangular batteries
are only good when fresh and even then they don't last
long.

73 de w1mt
mike

--- Ci <BPCI@...> wrote:

> Now
> I find my 40 meter board has the same whoop so I
> will continue
> troubleshooting that filter. Any suggestions would
> be appreciated. What
> a neat little radio this is...Ci
>

Everyone is raving about the all-new Yahoo! Mail
(http://advision.webevents.yahoo.com/mailbeta/)

457. Re: [AT_Sprint] ATS 3A First QSO

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-03 15:34:05 UTC
From: John A. Evans - N0HJ
Topic: 454 Message: 457

Aren't there issues with too much voltage? I know some AAs are high
fresh out of the box.

72 - john - n0hj

Michael Harnage wrote:
>
> Nice job Ci,
> ... 8xAA
> works FB in most cases. ...
>
> 73 de w1mt
> mike
>

458. Re: [AT_Sprint] ATS 3A First QSO

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-03 15:55:20 UTC
From: BPCI@aol.com
Topic: 454 Message: 458

In a message dated 11/3/2006 8:33:09 AM Mountain Standard Time,
w1mt@... writes:

first 3A batch

Thanks for your advice, Mike. Mine is from the most recent shipment, so I
shouldn't have the cap problem. Thanks for the advice re the battery, as well.
That was the problem! I assumed since the various parts can run on much lower
voltage that my well-used NIMH 9 volt was good to use--it isn't. Again,
thanks...73, Ci

Ci Jones, WU7R
FISTS #10789, CC #1853
NAQCC #306
ARCI #12163
SKCC #22, C#38
FP #1442

459. Re: [AT_Sprint] ATS 3A First QSO

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-03 15:48:57 UTC
From: Karl Larsen
Topic: 454 Message: 459

John A. Evans - N0HJ wrote:
> Aren't there issues with too much voltage? I know some AAs are high
> fresh out of the box.
>
> 72 - john - n0hj
>
> Michael Harnage wrote:
>>
>> Nice job Ci,
>> ... 8xAA
>> works FB in most cases. ...
>>
>> 73 de w1mt
>> mike
>>
I am using 10 by rechargeable AA in a 10 pack I ordered from Mouser.
The rechargables are about 1.2 volts most of their life. They seem to be
good for a whole day of portable use.

72 Karl K5DI

460. XF4DL: WORKED!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-03 16:08:48 UTC
From: Roland Whitsitt
Topic: 460 Message: 460

Ok, he was loud, about a S-6 on the imaginary scale. But he was not getting much action on 30 meters calling CQ over and over. The band was very quiet. I couldn't hear anybody else but xf4dl. So I threw out my call: n5vwn/qrp. He came back straight away! "n5v?" So I sent it off a few more times and he was patient and got it! Helps make up some for not getting Peter-One island even with 100 watts. Although I heard of another guy that worked Peter 1 with a kx-1. So I went to bed at 2am and couldn't get to sleep for an hour basking in the thrill. I would have stayed up longer too, but the XYL had enough of that! hi hi

"You can overcome a bad rig with a good antenna.
But you can't overcome a bad antenna with a good rig."
Okay...not an absolute statement. hi hi The kx1 is a good rig but a great antenna helps! At the time of Peter 1 my only 100 watt rig was an aging DX70 and my antenna is rather low to the ground at about 20'. And the Pile ups were more than I had time for. Full time job to snagg them and I didn't have the time.

On another note: the Alinco is now in the Philippines awaiting my time there over Chrismas. Hope to work you guys. I'll be DU9/N5VWN. Tempted to take the ATS3. Japan is very loud on 40 meters in California and even on 80 so I'm hoping the Philippines will be loud also. I don't hear them much though.

Roland n5vwn

461. Re: [AT_Sprint] ATS 3A First QSO

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-03 17:01:59 UTC
From: Mark Brueggemann
Topic: 454 Message: 461

--- BPCI@... wrote:

> my well-used NIMH 9 volt was good to use--it isn't.

Is it even 9V? I know the NiCd 9V batteries are really
only 7.5V.

Mark K5LXP
Albuquerque, NM

462. Re: [AT_Sprint] ATS 3A First QSO

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-03 17:20:42 UTC
From: BPCI@aol.com
Topic: 454 Message: 462

In a message dated 11/3/2006 10:06:16 AM Mountain Standard Time,
qrq_cw@... writes:

Is it even 9V? I know the NiCd 9V batteries are really
only 7.5V.

Freshly charged, it is only 8.37 volts. No wonder they don't last very
long...

Ci Jones, WU7R
FISTS #10789, CC #1853
NAQCC #306
ARCI #12163
SKCC #22, C#38
FP #1442

463. Re: [AT_Sprint] ATS 3A First QSO

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-03 17:32:06 UTC
From: Michael Harnage
Topic: 454 Message: 463

It's not lack of voltage, its the lack of current
capacity.

Steve explained it once, something to the effect, that
these 9V batteries are just a bunch of really small
capacity cells in series. As such, they have high
internal resistance and thus can't supply the peak
current needed for tx.

-mike/w1mt

--- BPCI@... wrote:
>
>
> Freshly charged, it is only 8.37 volts. No wonder
> they don't last very
> long...
>

_____
Low, Low, Low Rates! Check out Yahoo! Messenger's cheap PC-to-Phone call rates
(http://voice.yahoo.com)

464. Re: ATS 3A First QSO

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-03 19:15:35 UTC
From: Tim Keene
Topic: 454 Message: 464

Yup, if you take apart a regular alkaline 9v battery you will find
several quad A (AAAA) batteries. If you have one of those small LED
pens it is a good source for your batteries.
Tim - K5DEZ

--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:
>
> It's not lack of voltage, its the lack of current
> capacity.
>
> Steve explained it once, something to the effect, that
> these 9V batteries are just a bunch of really small
> capacity cells in series. As such, they have high
> internal resistance and thus can't supply the peak
> current needed for tx.
>
> -mike/w1mt
>
> --- BPCI@... wrote:
> >
> >
> > Freshly charged, it is only 8.37 volts. No wonder
> > they don't last very
> > long...
> >
>
>
>
>

> Low, Low, Low Rates! Check out Yahoo! Messenger's cheap PC-to-
Phone call rates
> (http://voice.yahoo.com)
>

465. Re: [AT_Sprint] ATS 3A First QSO

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-03 20:32:28 UTC
From: BPCI@aol.com
Topic: 454 Message: 465

In a message dated 11/3/2006 10:43:58 AM Mountain Standard Time,
w1mt@... writes:

Steve explained it once,

What is the lightest battery configuration that supplies nine volts or so?

Ci Jones, WU7R
FISTS #10789, CC #1853
NAQCC #306
ARCI #12163
SKCC #22, C#38
FP #1442

466. Re: [AT_Sprint] ATS 3A First QSO

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-03 20:58:12 UTC
From: Michael Harnage
Topic: 454 Message: 466

Lithiums are the lightest. There are two common
varieties used with these rigs.

1. Lithium (non rechargable) AA sized (Energizers I
think). Use 6 of them for about 9.0 volts.
Here is a link to the manufacturer <
http://www.energizer.com/products/lithium/default.aspx
>

2. Lithium-polymers aka lipo's. These are 3.7 volts
per cell, so a 2-cell version is 7.4v while a 3 cell
version is 11.1v. Theses come in different current
capacities. For the Spartan Sprints I use 2-cell
240mAh sized lipo's. These are the super lightweight
BUT require careful handling and charging.

-mike/w1mt

--- BPCI@... wrote:

>
>
> In a message dated 11/3/2006 10:43:58 AM Mountain
> Standard Time,
> w1mt@... writes:
>
> Steve explained it once,
>
>
> What is the lightest battery configuration that
> supplies nine volts or so?
>
> Ci Jones, WU7R
> FISTS #10789, CC #1853
> NAQCC #306
> ARCI #12163
> SKCC #22, C#38
> FP #1442
>

Get your email and see which of your friends are online - Right on the New Yahoo.com
(http://www.yahoo.com/preview)

467. Re: [AT_Sprint] ATS 3A First QSO

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-03 23:19:51 UTC
From: BPCI@aol.com
Topic: 454 Message: 467

In a message dated 11/3/2006 2:00:26 PM Mountain Standard Time,
w1mt@... writes:

Lithiums are the lightest. There are two common
varieties used with these rigs.

Thanks for this information...

Ci Jones, WU7R
FISTS #10789, CC #1853
NAQCC #306
ARCI #12163
SKCC #22, C#38
FP #1442

468. Re: [AT_Sprint] ATS 3A First QSO

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-03 23:50:00 UTC
From: Gil Stacy
Topic: 454 Message: 468
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

469. Re: [AT_Sprint] ATS 3A First QSO

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-04 01:42:16 UTC
From: w9ya@arrl.net
Topic: 454 Message: 469

Hey gang;

Well it is a little of both actually. Low voltage does not help any, but you are right Mike that the inability to supply current rapidly is a problem to the tx "power chain".

In fact when you take apart a standard 9v cell you will find not just one cell but 6 in series. And they are too small to supply much current for any length of time. O.K. when they are absolutely fresh, but that is not for very long either. If in doubt, just think how much current you can source quickly (after all this IS suppose to be a class D/E final structure) from a AAA cell. Then compare that to the size of the 6 cells in the 9v case.

So everyone is right here, just depends on what you performance expectations you are willing to settle for.

Vy 72;

Bob
w9ya

> It's not lack of voltage, its the lack of current
> capacity.
>
> Steve explained it once, something to the effect, that
> these 9V batteries are just a bunch of really small
> capacity cells in series. As such, they have high
> internal resistance and thus can't supply the peak
> current needed for tx.
>
> -mike/w1mt
>
> --- BPCI@... wrote:
>>
>>
>> Freshly charged, it is only 8.37 volts. No wonder
>> they don't last very
>> long...
>>
>
>

470. Re: ATS 3A First QSO

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-04 12:44:03 UTC
From: Ann
Topic: 454 Message: 470

Ci,
The Lithium Polymer Battery Pack I use (11.1 V 1800mAh) weighs 4.25
ounces on a digital scale. I picked it up at www.BatterySpace.com
It's 3.5" x 2" x 1/2" (If you want to see it I have a picture on the
Photos section of this group under my call AB1DR) You DO need to
take some precautions when charging and transporting the cell but this
battery pack does have a protection circuit built in.
GL es have fun with your ATS-3a :)
Vry 72
Ann
AB1DR

--- In AT_Sprint@yahoogroups.com, BPCI@... wrote:
>
>
>
> In a message dated 11/3/2006 10:43:58 AM Mountain Standard Time,
> w1mt@... writes:
>
> Steve explained it once,
>
>
> What is the lightest battery configuration that supplies nine volts
or so?
>
> Ci Jones, WU7R
> FISTS #10789, CC #1853
> NAQCC #306
> ARCI #12163
> SKCC #22, C#38
> FP #1442
>

471. Re: [AT_Sprint] Re: ATS 3A First QSO

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-04 13:18:36 UTC
From: BPCI@aol.com
Topic: 454 Message: 471

In a message dated 11/4/2006 5:49:30 AM Mountain Standard Time,
AB1DR@... writes:

Ci,
The Lithium Polymer Battery Pack I use (11.1 V 1800mAh) weighs 4.25
ounces on a digital scale. I picked it up at www.BatterySpace.ounces o
It's 3.5" x 2" x 1/2" (If you want to see it I have a picture on the

Thanks, Ann. You pictures are great.

Ci Jones, WU7R
FISTS #10789, CC #1853
NAQCC #306
ARCI #12163
SKCC #22, C#38
FP #1442

472. Re: [AT_Sprint] ATS 3A First QSO

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-04 17:56:04 UTC
From: Petr Ouředník
Topic: 454 Message: 472

Hi Ci,

my hat going down > great job with Your ATS-3A. Mainboard of my ATS-3A is done and aligned but as I am really bussy these weeks my work going very slowly but I am finishing 20m filter board so I hope we will be able to try QSO even US>EU friend !

Again congratulation and have a nice fun with this sweety box.

73, Petr OK1RP

> ------------ Původní zpráva ------------
> Od: Ci <BPCI@...>
> Předmět: [AT_Sprint] ATS 3A First QSO
> Datum: 03.11.2006 16:09:30
> --
> I just finished my ATS-3A and had a QSO with AC2C in Maryland (not bad
> from Montana)on 20 Meters. At first I had a "Whoop" when keying the
> transmitter, but was able to adjust it out using the on-board cap. Now
> I find my 40 meter board has the same whoop so I will continue
> troubleshooting that filter. Any suggestions would be appreciated. What
> a neat little radio this is...Ci
>
>
>
>
>

Petr Ouředník
00420608230010 (private)
indians@...
www.qsl.net/ok1rp

473. Re: [AT_Sprint] ATS 3A First QSO

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-04 20:17:56 UTC
From: BPCI@aol.com
Topic: 454 Message: 473

In a message dated 11/4/2006 11:08:32 AM Mountain Standard Time,
indians@... writes:

Again congratulation and have a nice fun with this sweety box

Thanks, Petr

Ci Jones, WU7R
FISTS #10789, CC #1853
NAQCC #306
ARCI #12163
SKCC #22, C#38
FP #1442

474. ATS-3A on the road

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-05 02:11:12 UTC
From: Thomas Kuehl
Topic: 474 Message: 474

Hi group,

We'll I am now in Bangalore, India. My ATS-3A, ZM-2 and various wires packed inside my luggage made it through the US inspection without a hitch. Normally, upon arrival at my destination I find one of those TSA cards stating my luggage had been searched. Not this time. So after this very busy work week coming up, I'll head back to Germany where I'll put the ATS-3A on the air. Maybe I'll be lucky and work some DX from the US!

'73, Thomas - AC7A

Access over 1 million songs - Yahoo! Music Unlimited Try it today.

475. Re: ATS-3A on the road

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-05 10:37:44 UTC
From: Sergej Kindsvater
Topic: 474 Message: 475

Thomas,

Since more than a year I am taking my ATS-3 with the elecraft T1 ATU with me on business trips (which are more or less each week). Sofar I never had any problem with the airport security.

I am also taking a small telescopic fishing rod (1,5 meters stretched out, 40 cm collapsed) to gain some clearance from the wall when I am throwing out an 8 mtrs long wire in an inverted L fashion.

With this setup I have many times made 1000 miles per watt, like 4X/DF6MU to P43, TA1/DF6MU to 9M6, ZS6/DF6MU to UA9 (just two weeks ago). Mostly on 40 meters using greyline skip, always from hotel rooms.

I wonder if anybody has an experience with small loops indoors (some hotels don't have windows)?

vy 73

Sergej DF6MU / W6MHZ

--- In AT_Sprint@yahoogroups.com, Thomas Kuehl <qrp_op@...> wrote:
>
> Hi group,
>
> We'll I am now in Bangalore, India. My ATS-3A, ZM-2 and various wires packed inside my luggage made it through the US inspection without a hitch. Normally, upon arrival at my destination I find one of those TSA cards stating my luggage had been searched. Not this time. So after this very busy work week coming up, I'll head back to Germany where I'll put the ATS-3A on the air. Maybe I'll be lucky and work some DX from the US!
>
> '73, Thomas - AC7A
>
>
>
>
> ---------------------------------
> Access over 1 million songs - Yahoo! Music Unlimited Try it today.
>

476. Re: [AT_Sprint] Re: ATS-3A on the road

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-05 20:22:29 UTC
From: Steven Weber
Topic: 474 Message: 476

>I wonder if anybody has an experience with small loops indoors (some
>hotels don't have windows)?

Sergej,

Small loops are very sensitive to near-by objects and in a typical motel or hotel room, there are pleanty of those! And if the building is made of steel and concrete, not much signal is likely to get outside.

I played around with a small "distributed capacitance twisted loop" for 40M made from twin lead while I was living in a small, one room apartment. (Okay, it was really a hotel room). Tuning was very touchy and never did get it right. Of course, I didn't have a very good way of keeping its shape or a good way to hang it, which was probably much of the problem with it.

I trust you've tried just running your wire around the room without much luck? How about zig-zagging the wire up and down in front of the window? Or maybe up and down in front of the outside wall.

If anyone wants to try the DCTL, a loop is made from 15 feet, 7 1/2 inches of 300 ohm twin lead with a half twist in it. Hang it as an equilateral triangle. It is feed from the bottom with 300 ohm line. A 2" open and 27 1/2" shorted stub is also connected to the feed point.
From Sept 93 "73" by WA6QBU

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

477. ATS-3a Birth Announcement :)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-08 20:43:17 UTC
From: Ann
Topic: 477 Message: 477

On 15:46 UCT a new ATS 3a arrived alive and well with a QSO for the first time with PJ4/DL1CW on 20 Meters....WOW!!! He sent me a 539. The bands are pretty bad out there and he wasn't giving a ton of 5nn's out even to the QRO stations so I"m VERY happy!!
This is the third ATS I've built and I have to say this is the Ferrari Testarossa edition of the ATS 3, very sleek and with enhancements!!!! VERY COOL!!! Since I had an ATS-3 running I wasn't in a hurry to build the 3a but I have to say, I should have built it sooner. My KX1 will be collecting dust...I think I'll have to take the batteries out of it and put it away.
I was messing around this morning and had two antennas connnected...one to my FT-1000D and one to my ATS-3a...I have to say the receive on the ATS 3a is pretty hot stuff...wondering if anyone has done a side by side comparison and what they came up with.
I am SO addicted to these GREAT little rigs...they are a BLAST to build and even MORE fun to put on the air. I wish I had a strong back ground in electronics so I could FULLY appreciate Steve's incredible design I HAVE to say that every time I build another one I do learn a little more but I have decades of catching up to do!!!
I can't believe the genius of KD1JV....this rig even packages up smaller than the 3!!!!!
OK Neil if you are reading this how are you doing with your kit ;) ;) ;) ???
72/88
Ann
AB1DR

478. Re: ATS-3a Birth Announcement :)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-08 23:28:54 UTC
From: w1sst
Topic: 477 Message: 478

Okay, I read all of the posts.
The short answer is bad, I cleaned all my soldering stuff and
magnifying glasses off of the kitchen table to impress my girlfriend
this weekend, and I had just started it.
Well, that didn't work, it apparently takes more than a clean table to
impress a woman, I wish you had warned me!!

Long answer, soon. I'm hoping to get the main board finished this
weekend. Let her be unimpressed, what the heck.

72
neil aa1sb

--- In AT_Sprint@yahoogroups.com, "Ann" <AB1DR@...> wrote:
>
> On 15:46 UCT a new ATS 3a arrived alive and well with a QSO for the
> first time with PJ4/DL1CW on 20 Meters....WOW!!! He sent me a 539.
> The bands are pretty bad out there and he wasn't giving a ton of 5nn's
> out even to the QRO stations so I"m VERY happy!!
> This is the third ATS I've built and I have to say this is the
> Ferrari Testarossa edition of the ATS 3, very sleek and with
> enhancements!!!! VERY COOL!!! Since I had an ATS-3 running I wasn't
> in a hurry to build the 3a but I have to say, I should have built it
> sooner. My KX1 will be collecting dust...I think I'll have to take
> the batteries out of it and put it away.
> I was messing around this morning and had two antennas
> connnected...one to my FT-1000D and one to my ATS-3a...I have to say
> the receive on the ATS 3a is pretty hot stuff...wondering if anyone
> has done a side by side comparison and what they came up with.
> I am SO addicted to these GREAT little rigs...they are a BLAST to
> build and even MORE fun to put on the air. I wish I had a strong back
> ground in electronics so I could FULLY appreciate Steve's incredible
> design I HAVE to say that every time I build another one I do learn a
> little more but I have decades of catching up to do!!!
> I can't believe the genius of KD1JV....this rig even packages up
> smaller than the 3!!!!!
> OK Neil if you are reading this how are you doing with your kit ;)
> ;) ;) ???
> 72/88
> Ann
> AB1DR
>

479. Re: [AT_Sprint] ATS-3a Birth Announcement :)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-09 00:35:34 UTC
From: Thomas Kuehl
Topic: 477 Message: 479

Ann,

Congratulations on your ATS-3A's successful build and first QSO. Mine is with me here in India, tucked away in my carry-on baggage. So far, my ATS-3A, tuner, paddle, twin lead and antenna wires have made it through each of the airline inspections without concern. Yesterday, my travel partner had his bags repeatedly searched because of the electronics demo circuits he had in his bags. Fortunately, he was able to explain what and why he had all of it in his luggage. Since I don't have an Indian operating license and I am not operating my gear from here, I don't want to have to explain to the Indian author ties why I am carrying amateur radio equipment in their country. They are very nice people, but also very tenacious when it comes to their security.

Next Monday morning, just after midnight, I head back to Germany. If all goes right I should have my ATS-3A on the air by Monday afternoon from DL-land. No problem there because of our CEPT agreement.

Again, congrats on your accomplishment.

'73, Thomas - AC7A (Pune, India)

Ann <AB1DR@...> wrote:
On 15:46 UCT a new ATS 3a arrived alive and well with a QSO for the
first time with PJ4/DL1CW on 20 Meters....WOW!!! He sent me a 539.
The bands are pretty bad out there and he wasn't giving a ton of 5nn's
out even to the QRO stations so I"m VERY happy!!
This is the third ATS I've built and I have to say this is the
Ferrari Testarossa edition of the ATS 3, very sleek and with
enhancements!!!! VERY COOL!!! Since I had an ATS-3 running I wasn't
in a hurry to build the 3a but I have to say, I should have built it
sooner. My KX1 will be collecting dust...I think I'll have to take
the batteries out of it and put it away.
I was messing around this morning and had two antennas
connnected...one to my FT-1000D and one to my ATS-3a...I have to say
the receive on the ATS 3a is pretty hot stuff...wondering if anyone
has done a side by side comparison and what they came up with.
I am SO addicted to these GREAT little rigs...they are a BLAST to
build and even MORE fun to put on the air. I wish I had a strong back
ground in electronics so I could FULLY appreciate Steve's incredible
design I HAVE to say that every time I build another one I do learn a
little more but I have decades of catching up to do!!!
I can't believe the genius of KD1JV....this rig even packages up
smaller than the 3!!!!!
OK Neil if you are reading this how are you doing with your kit ;)
;) ;) ???
72/88
Ann

AB1DR

Everyone is raving about the all-new Yahoo! Mail.

480. Re: ATS-3a Birth Announcement :)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-10 00:09:26 UTC
From: Dave
Topic: 477 Message: 480

> wondering if anyone has done a side by side comparison and what
> they came up with.

I've done a sid-by-side with my ATS-3A and an FT-757GXII and the sensitivity is virtually identical. However, I much prefer the narrower filter in the ATS-3A.

Dave

481. ATS-3A keying thump revisited

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-10 00:37:30 UTC
From: Dave
Topic: 481 Message: 481

I made a serendipitous discovery today. I noticed the processor wasn't resetting normally in K2OQ's newly completed ATS-3A, so I pulled out the board to fix an unsoldered pad on the twisted U12 reset chip. I also swapped out the 22uF cap for a 100uF. At the same time, I noticed that L3 had been wound with 14 turns instead of 13, so I corrected that as well. When I was done, I found that the key-release thump was much more pronounced; a real thump instead of just a click. Tacking the 22uF cap back in on top of the regulator chip, in parallel with the 100uF changed nothing. The thump is now as heavy as it was on my ATS-3A before doing the Mute-line resistor and capacitor.

I figure that the reset-chip fix is totally unrelated, so my conclusion is that changing the number of turns on L3 made the difference. I don't know what to make of that, though. I know I'm counting the turns correctly (1 pass through the center = 1 turn); my counts on the band-module coils match the pictures in the manual.

Any thoughts? Aside form the thump, what's the effect of using 14 turns on L3 instead of 13 turns (increasing the inductance by 16%)? Measured power output is the same with either 13 or 14 turns.

Dave

482. Re: ATS-3A keying thump revisited

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-10 05:13:47 UTC
From: Dave
Topic: 481 Message: 482

Never mind. I tried reversing the changes I had made (except for that which fixed the reset circuit) and the click/thump remains about the same. In this case, the 100uF cap doesn't seem to do any better than the 22uF either. It appears that this ATS-3A will need the resistor and cap on the Mute line, as did mine.

Dave

483. 80 Meter Antenna:

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-15 14:11:33 UTC
From: chris reeves
Topic: 483 Message: 483

Hi, I am new just built my rig around first Nov. Steven realy knows his stuff! I would like some suggestions for and antenna for 80 meters. I camp and 50 feet is the most room I usualy have to use. I am building an L Tuner but prefer a resonant matched antenna.

484. Re: [AT_Sprint] 80 Meter Antenna:

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-15 15:24:52 UTC
From: sergej kindsvater
Topic: 483 Message: 484
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

485. Re: 80 Meter Antenna:

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-15 17:16:09 UTC
From: chris reeves
Topic: 483 Message: 485

Looks like a good antenna, i looked it up, but i have never purchased an antenna. I am looking to make one. I know that when using only a short random wire to recieve realy cuts down on what i hear on 80 M. The L-Tuner i am biulding is a last resort kind of option to me.

--- In AT_Sprint@yahoogroups.com, "sergej kindsvater" <df6mu.radio@...> wrote:
>
> I've been successfully using Walter Spieth's (DK9SQ) folded wire vertical
> with his telescoping mast, installed elevated with only one resonant radial
> makes it a reasonable aerial.
>
> 72
>
> Sergej DF6MU
>
> On 11/15/06, chris reeves <kr4ez@...> wrote:
> >
> > Hi, I am new just built my rig around first Nov. Steven realy knows
> > his stuff! I would like some suggestions for and antenna for 80
> > meters. I camp and 50 feet is the most room I usualy have to use. I am
> > building an L Tuner but prefer a resonant matched antenna.
> >
> >
> >
>
>
>
> --
> Sergej Kindsvater
> DF6MU, W6MHZ
>
> Normal people believe that if it ain't broke, don't fix it. Engineers
> believe that if it ain't broke, it doesn't have enough features yet.
>

486. Re: 80 Meter Antenna:

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-15 18:03:32 UTC
From: chris reeves
Topic: 483 Message: 486

Looks like a good antenna, i looked it up, but i have never purchased an antenna. I am looking to make one. I know that when using only a short random wire to recieve realy cuts down on what i hear on 80 M. The L-Tuner i am biulding is a last resort kind of option to me.

--- In AT_Sprint@yahoogroups.com, "sergej kindsvater" <df6mu.radio@...> wrote:
>
> I've been successfully using Walter Spieth's (DK9SQ) folded wire vertical
> with his telescoping mast, installed elevated with only one resonant radial
> makes it a reasonable aerial.
>
> 72
>
> Sergej DF6MU
>
> On 11/15/06, chris reeves <kr4ez@...> wrote:
> >
> > Hi, I am new just built my rig around first Nov. Steven realy knows
> > his stuff! I would like some suggestions for and antenna for 80
> > meters. I camp and 50 feet is the most room I usualy have to use. I am
> > building an L Tuner but prefer a resonant matched antenna.
> >
> >
> >
>
>
>
> --
> Sergej Kindsvater
> DF6MU, W6MHZ
>
> Normal people believe that if it ain't broke, don't fix it. Engineers
> believe that if it ain't broke, it doesn't have enough features yet.
>

487. Programming memory keyer

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-19 04:55:37 UTC
From: Karl Luedemann
Topic: 487 Message: 487

I have been having trouble with programming more than
1 memory location in the memory keyer. The manual
says to send 7 dashes to separate messages, then right
below it, it says, "If more than one message was
entered, you will hear the 8 dash break separating the
messages". My first message goes into the keyer, but
I can't get the other two to send the, RIT button, as
the manual says which is "SPLIT" now, and the tune
up/down buttons. The SPLIT button sends my first
message, but the tune up/down buttons don't send the
other two. I think I am doing something wrong? 7 or
8 dashes between messages doesn't seem to work.
What's going on? Thanks for any help!

Sponsored Link

Mortgage rates near 39yr lows.
$510k for $1,698/mo. Calculate new payment!
www.LowerMyBills.com/lre

488. Re: Programming memory keyer

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-19 15:36:36 UTC
From: chris reeves
Topic: 487 Message: 488

I do not know if this will help but i found the timing to be cridical when changing the keyer speed. I had to hit the up or down key almost instantly to change the speed. if i didn't the sprint would not go into the menu option. Once you have the hang of this it is very good because operating the sprint is very fast. I would try entering mesages on mine but i do not have a paddle. I hope this will help.

--- In AT_Sprint@yahoogroups.com, Karl Luedemann <karllued@...> wrote:
>
> I have been having trouble with programming more than
> 1 memory location in the memory keyer. The manual
> says to send 7 dashes to separate messages, then right
> below it, it says, "If more than one message was
> entered, you will hear the 8 dash break separating the
> messages". My first message goes into the keyer, but
> I can't get the other two to send the, RIT button, as
> the manual says which is "SPLIT" now, and the tune
> up/down buttons. The SPLIT button sends my first
> message, but the tune up/down buttons don't send the
> other two. I think I am doing something wrong? 7 or
> 8 dashes between messages doesn't seem to work.
> What's going on? Thanks for any help!
>
>
>
>

> Sponsored Link
>
> Mortgage rates near 39yr lows.
> $510k for $1,698/mo. Calculate new payment!
> www.LowerMyBills.com/lre
>

489. Re: [AT_Sprint] Re: Programming memory keyer

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-19 17:01:55 UTC
From: Karl Larsen
Topic: 487 Message: 489

Guys, I think there is some problems here. Changing speed with a straight key is next to impossible. Then making a memory or memories is total impossible. You need a keyer paddle of some sort.

There are four buttons on the radio. Many functions are press RIT and let up on the function you want. The problem with more than one message saved is hard because there are times you tap a function and times you hold down a function.

When I compare entering and correcting saved CW messages, my FT-857D is a snap and my ATS-3 is a chore. But both radios assume you have a paddle.

72 73 Karl K5DI

chris reeves wrote:
> I do not know if this will help but i found the timing to be cridical
> when changing the keyer speed. I had to hit the up or down key almost
> instantly to change the speed. if i didn't the sprint would not go
> into the menu option. Once you have the hang of this it is very good
> because operating the sprint is very fast. I would try entering
> mesages on mine but i do not have a paddle. I hope this will help.
>
>
>
>
> --- In AT_Sprint@yahoogroups.com, Karl Luedemann <karllued@...> wrote:
>
>> I have been having trouble with programming more than
>> 1 memory location in the memory keyer. The manual
>> says to send 7 dashes to separate messages, then right
>> below it, it says, "If more than one message was
>> entered, you will hear the 8 dash break separating the
>> messages". My first message goes into the keyer, but
>> I can't get the other two to send the, RIT button, as
>> the manual says which is "SPLIT" now, and the tune
>> up/down buttons. The SPLIT button sends my first
>> message, but the tune up/down buttons don't send the
>> other two. I think I am doing something wrong? 7 or
>> 8 dashes between messages doesn't seem to work.
>> What's going on? Thanks for any help!
>>
>>
>>
>>
>>
> _____

>

490. Re: [AT_Sprint] Programming memory keyer

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-19 20:54:41 UTC
From: Michael Harnage
Topic: 487 Message: 490

Couple of thinks,

make sure that the memory marker is 7 dashes in 1
character. That is, hold the dah paddle down for 7
continous dashes. If the manual says 8 then Steve
might have made a mistake on that.

the other thing is that to get the second two memories
to play you should be fairly quick on the second
button (tune up or tune down) after clicking the rit
button.

If you hear your first message then the memory marker
was input correctly because the firmware stops the
first message when it finds a memory marker. So I
think it may be the starting of the 2nd and 3rd
memories that might be the problem. Try two fingers,
one on the rit button and one on the tune down button
(for the 2nd memory) and experiment with timing till
it works.

Let us know how it works out...

-mike/w1mt

-- Karl Luedemann <karllued@...> wrote:

> I have been having trouble with programming more
> than
> 1 memory location in the memory keyer.

Sponsored Link

Degrees online in as fast as 1 Yr
MBA, Bachelor's, Master's, Assoc
http://yahoo.degrees.info

491. Run for the Bacon, 11/19/2006, 6:00 pm

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-20 01:45:37 UTC
From: AT_Sprint@yahoogroups.com
Topic: 491 Message: 491

Reminder from the Calendar of AT_Sprint
http://groups.yahoo.com/group/AT_Sprint/cal

Run for the Bacon
Sunday November 19, 2006
6:00 pm - 8:00 pm
(This event repeats on the third Sunday of every month.)
Location: Your shack or anywhere

Notes:
This Sunday evening, the Flying Pigs Amateur Radio Club International
will be holding its monthly Run For The Bacon. This is a friendly,
two hour QRP CW Sprint, which is open to ALL radio amateurs, will last
from 9:00 - 11:00PM EDT (0200-0400 UTC Monday).

You may work stations once per band on 160, 80, 40, 20, 15 or 10
Meters. Suggested starting frequencies are 1.812, 3.562, 7.044,
14.062, 21.062, and 28.062 MHz.

The exchange is RST, S/P/C (State, Province, Country) and Flying Pigs
membership number. If you're not a member of the Flying Pigs, and
would like to be; then please cli

Set up birthday reminders
http://us.rd.yahoo.com/cal_us/rem/?http://groups.yahoo.com/group/AT_Sprint/cal?v=9&evt_typ
e=13

Copyright © 2006 All Rights Reserved
www.yahoo.com

Privacy Policy:
http://privacy.yahoo.com/privacy/us

Terms of Service:
http://docs.yahoo.com/info/terms/

492. Re: Programming memory keyer

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-20 02:58:12 UTC
From: chris reeves
Topic: 487 Message: 492

I think you are getting us mixed up. Kar is the one with the keyer memory issues, I just noted that timing seemed to be cridical when operating the ats3a. I only us a strait key and i did not have much trouble changing the keyer speed with the buttons on the ats3a. I just changed it so the freq counter and anouncements would be a little easier to catch. I do not plan to use the memory or a paddle at least in the neer future. I find the ats3a very easy to operate after i spent a little time geting used to it.

--- In AT_Sprint@yahoogroups.com, Karl Larsen <k5di@...> wrote:
>
>
> Guys, I think there is some problems here. Changing speed with
a
> straight key is next to impossible. Then making a memory or
memories is
> total impossible. You need a keyer paddle of some sort.
>
> There are four buttons on the radio. Many functions are press
RIT
> and let up on the function you want. The problem with more than one
> message saved is hard because there are times you tap a function
and
> times you hold down a function.
>
> When I compare entering and correcting saved CW messages, my FT-
857D
> is a snap and my ATS-3 is a chore. But both radios assume you have
a paddle.
>
> 72 73 Karl K5DI
>
>
>
>
>
>
>
>
> chris reeves wrote:
> > I do not know if this will help but i found the timing to be
cridical
> > when changing the keyer speed. I had to hit the up or down key
almost
> > instantly to change the speed. if i didn't the sprint would not
go

> > into the menu option. Once you have the hang of this it is very
good
> > because operating the sprint is very fast. I would try entering
> > mesages on mine but i do not have a paddle. I hope this will help.
> >
> >
> >
> >
> > --- In AT_Sprint@yahoogroups.com, Karl Luedemann <karllued@>
wrote:
> >
> >> I have been having trouble with programming more than
> >> 1 memory location in the memory keyer. The manual
> >> says to send 7 dashes to separate messages, then right
> >> below it, it says, "If more than one message was
> >> entered, you will hear the 8 dash break separating the
> >> messages". My first message goes into the keyer, but
> >> I can't get the other two to send the, RIT button, as
> >> the manual says which is "SPLIT" now, and the tune
> >> up/down buttons. The SPLIT button sends my first
> >> message, but the tune up/down buttons don't send the
> >> other two. I think I am doing something wrong? 7 or
> >> 8 dashes between messages doesn't seem to work.
> >> What's going on? Thanks for any help!
> >>
> >>
> >>
> >>
> >>
> >
_____
> >
>

493. Re: Programming memory keyer

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-20 07:05:57 UTC
From: karllued
Topic: 487 Message: 493

Thanks to Michael, W1MT, I read the manual again and it made perfect sense. It works fine. The second memory has to be sent with a two button sequence, first the RIT, or SPLIT button, followed quickly, (within 1/3 of a second), by the Tune down button, (or Tune up button, depending on what memory you want to send. I was just quickly hitting the tune down button alone, as sending the first memory is a one key sequence of quickly hitting the RIT button. I had tried that, and simultaneously hitting the RIT and tune down buttons quickly, neither of which worked. Thanks Michael!--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:

> Couple of thinks,
>
> make sure that the memory marker is 7 dashes in 1
> character. That is, hold the dah paddle down for 7
> continous dashes. If the manual says 8 then Steve
> might have made a mistake on that.
>
> the other thing is that to get the second two memories
> to play you should be fairly quick on the second
> button (tune up or tune down) after clicking the rit
> button.
>
> If you hear your first message then the memory marker
> was input correctly because the firmware stops the
> first message when it finds a memory marker. So I
> think it may be the starting of the 2nd and 3rd
> memories that might be the problem. Try two fingers,
> one on the rit button and one on the tune down button
> (for the 2nd memory) and experiment with timing till
> it works.
>
> Let us know how it works out...
>
> -mike/w1mt
>
> -- Karl Luedemann <karllued@...> wrote:
>
> > I have been having trouble with programming more
> > than
> > 1 memory location in the memory keyer.
>
>
>
>

> Sponsored Link
>
> Degrees online in as fast as 1 Yr
> MBA, Bachelor's, Master's, Assoc
> http://yahoo.degrees.info
>

494. 40m LC Filter from my photo gallery now tested

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-20 09:42:58 UTC
From: Lutz Bergner
Topic: 494 Message: 494

Hi all,

For some time I have schematics of my new sharp RX filters in my photo gallery. The 40m one was the only one not beeing tested before- only simulated.
Last weekend I built up one and compared it side by side to the ceramic filter BM (Murata SFE7.02). The results did surprise me a bit. I does sound as good as the simulation looks alike.(450KHz BW -20dB). The far-off selection of the LC filter seemed to be considerably better. I tested both filters in the worst time here , in the early evening hours. While there were some weak BC carriers and weak modulation artefacts audible with the ceramic filter - nothing of these with the LC!.
Antenna was a doublet with top 13m up. If there is somebody outside still trying to get the SFE7.02 for this purpose - there is no need to anymore. From now on I do prefer the LC one in my ATS-3.
Winding of the T37-6 toroids with 25 turns of the relatively stiff and thick 0.3mm magnetwire was not easy though. I broke 2 cores while trying it because 25 turns just fit on the inside of a T37 core. Unfortunately I can't suply measurement results. (not yet)

72s

Lutz,DL2HRP
--

495. Re: New project in works - base station accessory

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-23 23:19:29 UTC
From: Petr Ourednik
Topic: 412 Message: 495

Hi Steve,

can You share which status is currently with the base station accessories kit for ATS-3A please as I am very interested in and You can be sure that it seems to be my xmas gift...

Which casing You decided to use finally please? Is the PCB same size as ATS? It should be great to be able to stacking with current ATS pcb. Bad idea?

What about the mini autotuner builded in he accessory kit? If is already builded SWR meter??? Should be last one which highly missing for backpacking and its finaly best rig for me at all...

regards, 73 Petr OK1RP

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
> >however that Doug has stopped offering the BLT cases seperately.Perhaps,
> you could convince him to change
> >his mind?.....
>
> Err, bummer. I love the size and shape of the BLT case. Might have to
> rethink how to package this thing. Oh well, one problem at a time, gotta
> make it work first...
>
>
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://www.qsl.net/kd1jv/
> http://kd1jv.qrpradio.com
>

496. Re: [AT_Sprint] Re: New project in works - base station accessory

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-24 04:03:38 UTC
From: Steven Weber
Topic: 412 Message: 496

Petr, etal,

>can You share which status is currently with the base station
>accessories kit for ATS-3A please as I am very interested in and You
>can be sure that it seems to be my xmas gift...
>

I'm still waiting for the circuit boards and a couple of parts to arrive. I know the parts are in transit and hope the boards are too.

>Which casing You decided to use finally please? Is the PCB same size
>as ATS? It should be great to be able to stacking with current ATS
>pcb. Bad idea?
>

The assembled unit is 2.5" wide, 3.5" long and 1.5" tall. (6.35 cm X 8.89 cm X 3.81 cm) So, its a little too big to fit into an Altoids tin. Even if I had used all SMT parts, or more than I did, I don't think I could have fit it into an Altoids tin anyway. And since this is a base station accessory, saw no need to try.

>What about the mini autotuner builded in he accessory kit?

I don't think I could do an autotuner any smaller or less expensive than the Elecraft T1. For camping, I'd much rather a simple L tuner for 1/2 wave wire. Its simpler, smaller, lighter, more reliable and doesn't need power.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

497. Tuners

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-24 14:58:44 UTC
From: Michael Babineau
Topic: 497 Message: 497

Steve, KD1JV "Melt Solder" wrote :

>I don't think I could do an autotuner any smaller or less expensive than
>the Elecraft T1. For camping, I'd much rather a simple L tuner for 1/2 wave
>wire. Its simpler, smaller, lighter, more reliable and doesn't need power.

I can vouch for the T1. Its a really nice little autotuner. But, the ALT (Steve's design) also works very well with a 51 foot wire and counterpoise/ground radials and it does fit into an altoids tin and requires no power.

There is a commercial version of this kit available from Hendricks QRP kits (http://www.qrpkits.com/altoidslongwire.html). Its a fun little kit to build and works surprising well. I have found that once you figure out the jumper settings for a given band / wire length, the jumper settings are pretty much static so all you need to do is preset them and tweak the cap until the LED dims. What I also like about the ALT design is that the rig sees a 50 Ohm load during antenna tuning so no fear of your PA transistor "going south" while you try to figure out the matching.

Michael VE3WMB

P.S. Usual disclaimer: I have no financial interest in Hendricks QRP kits, I'm just a satisfied customer.

498. Re: Tuners

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-24 23:18:28 UTC
From: Ann
Topic: 497 Message: 498

Ditto on the ALT Tuner and a BIG Two Thumbs up....it's easy to use and it's very lightweight. A LOT lighter than the T1.
I know the manual suggests 51' with a 16' counterpoise but I use 66' with 16'. I KNOW it's supposed to tune on 40 though 10 but with 66' I have been able to tune on 80 using a NVIS antenna for "local contacts"...am I putting my ATS-3/ATS-3a at risk or are these results a fluke????
72
Ann
AB1DR

--- In AT_Sprint@yahoogroups.com, "Michael Babineau" <mbabineau@...> wrote:
>
> Steve, KD1JV "Melt Solder" wrote :
>
> >I don't think I could do an autotuner any smaller or less expensive than
> >the Elecraft T1. For camping, I'd much rather a simple L tuner for 1/2 wave
> >wire. Its simpler, smaller, lighter, more reliable and doesn't need power.
>
> I can vouch for the T1. Its a really nice little autotuner. But, the ALT (Steve's design)
> also works very well with a 51 foot wire and counterpoise/ground radials and it does fit
> into an altoids tin and requires no power.
>
> There is a commercial version of this kit available from Hendricks QRP kits
> (http://www.qrpkits.com/altoidslongwire.html). Its a fun little kit to build and works
> surprising well. I have found that once you figure out the jumper settings for a given
> band / wire length, the jumper settings are pretty much static so all you need to do is
> preset them and tweak the cap until the LED dims. What I also like about the ALT design is
> that the rig sees a 50 Ohm load during antenna tuning so no fear of your PA transistor
> "going south" while you try to figure out the matching.
>
>
> Michael VE3WMB

>
> P.S. Usual disclaimer: I have no financial interest in Hendricks QRP
kits, I'm just a
> satisfied customer.
>

499. Re: [AT_Sprint] Tuners

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-25 02:45:22 UTC
From: Roland Whitsitt
Topic: 497 Message: 499

I like the idea of the ALT tuner. My T-1 is fine except for 80 meters. It get's real fussy about tuning that unless I'm about 1/4 wave length of wire. I've been using my mini travel tuner most of the time. I've also got a BLT and it's not the greatest either. Really finicky about wire lengths. Gosh, that T-1 cost a fortune too. Works pretty good with mobile whips and close to resonate dipoles and beams. My big thing is having a compact tuner and being able to tune 20-80 meters but not being too big of a package.
Keep in mind that I built these tuners and my success record isn't perfect. But the K-2 has been working great! Also, on a side note, I notice that after I put my ATS to sending messages in slow code. I can't go back to fast code again. It just says "s" There is no fast option. I might have to figure out how to reprogam someday. Other wise the ATS3a has been working fine. Oh, is there suppose to be a "wide" option for the filter? I don't seem to have that. Or was that for the 1st run of the ATS3 only?
Roland N5VWN

----- Original Message -----
From: Michael Babineau
To: AT_Sprint@yahoogroups.com
Sent: Friday, November 24, 2006 6:58 AM
Subject: [AT_Sprint] Tuners

Steve, KD1JV "Melt Solder" wrote :

>I don't think I could do an autotuner any smaller or less expensive than
>the Elecraft T1. For camping, I'd much rather a simple L tuner for 1/2 wave
>wire. Its simpler, smaller, lighter, more reliable and doesn't need power.

I can vouch for the T1. Its a really nice little autotuner. But, the ALT (Steve's design) also works very well with a 51 foot wire and counterpoise/ground radials and it does fit into an altoids tin and requires no power.

There is a commercial version of this kit available from Hendricks QRP kits (http://www.qrpkits.com/altoidslongwire.html). Its a fun little kit to build and works surprising well. I have found that once you figure out the jumper settings for a given band / wire length, the jumper settings are pretty much static so all you need to do is preset them and tweak the cap until the LED dims. What I also like about the ALT design is that the rig sees a 50 Ohm load during antenna tuning so no fear of your PA transistor "going south" while you try to figure out the matching.

Michael VE3WMB

P.S. Usual disclaimer: I have no financial interest in Hendricks QRP kits, I'm just a satisfied customer.

500. Re: [AT_Sprint] Tuners

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-25 13:14:56 UTC
From: Michael Harnage
Topic: 497 Message: 500

Hi Roland,
I put a few notes below...

--- Roland Whitsitt <n5vwn@...> wrote:

Also, on a side note, I notice that
> after I put my ATS to sending messages in slow code.
> I can't go back to fast code again. It just says
> "s" There is no fast option.

I don't remember off the top of my head as I don't use
Steve's code anymore but if using the same button that
got you to "S" doesn't toggle back then it's probably
another button that puts you into "F" mode. I'll check
on Monday.

>Oh, is there suppose
> to be a "wide" option for the filter? I don't seem
> to have that. Or was that for the 1st run of the
> ATS3 only?

Wide mode is available for the ATS3 only, not the
ATS3A or ATS2. Limited of the hardware.

-mike

Want to start your own business?
Learn how on Yahoo! Small Business.
http://smallbusiness.yahoo.com/r-index

501. Re: [AT_Sprint] Tuners

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-25 17:47:17 UTC
From: Steven Weber
Topic: 497 Message: 501

>> after I put my ATS to sending messages in slow code.
>> I can't go back to fast code again. It just says
>> "s" There is no fast option.
>

There is no fast/slow option, you can set it to any speed you want to.

"S", the first selection in the menu is used to set the code speed of the keyer. Once you select a perticular keyer speed, you can store that to be used as the speed at which the frequency ennunciation is sent at, by going to the "P" option in the menu.

This of course, is all explained in the manual. Though there might be a mistake about which button to push to store that code speed. If it doesn't store the new speed, try the other button.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

502. Re: [AT_Sprint] Tuners

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-26 04:14:36 UTC
From: Roland Whitsitt
Topic: 497 Message: 502

Oh hi Steve, I don't have a problem with the code speed for sending. I'm talking about the code speed in which you receive information. I'm down there on the menu where it says toggle down for Iambic b or a and toggle up for sending fast or slow for stuff like reading frequency. But it only gives me the slow option not the fast. I had been using the slow readback code speed. Now I'd like to go back to factory default fast speed. Hope that clears it up.
73's Roland
----- Original Message -----
From: Steven Weber
To: AT_Sprint@yahoogroups.com
Sent: Saturday, November 25, 2006 9:47 AM
Subject: Re: [AT_Sprint] Tuners

>> after I put my ATS to sending messages in slow code.
>> I can't go back to fast code again. It just says
>> "s" There is no fast option.
>

There is no fast/slow option, you can set it to any speed you want to.

"S", the first selection in the menu is used to set the code speed of the keyer. Once you select a perticular keyer speed, you can store that to be used as the speed at which the frequency ennunciation is sent at, by going to the "P" option in the menu.

This of course, is all explained in the manual. Though there might be a mistake about which button to push to store that code speed. If it doesn't store the new speed, try the other button.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

503. Just Finished My ATS-3A Last Night - Great DX!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-27 02:10:18 UTC
From: Andrew C. MacAllister
Topic: 503 Message: 503

I only had one wiring problem - U12 was not soldered well. After hunting for a few hours, I found it, and the rig came right up! I did some calibrations, and put it on the air - right in the middle of a DX contest. Why not?!? Using a 9V battery with ~3W out on 40M to a vertical (18AVT) in the back yard, my first-ever QSO with the ATS-3A was IR4M. A few other European and South Pacific stations were just not hearing me well, but further QSOs with VY2TT and VP5SW were a LOT of fun!!

Thanks Steve!!!

Two photos have been posted. Now to box it up...

72 de Andy W5ACM
Houston, TX

504. Any chance of pushing ATS to 17m?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-27 14:53:24 UTC
From: steve_n0tu
Topic: 504 Message: 504

Steve, Any chance of pushing ATS to 17m? I know this is the upper limit or maybe over the limit for the CPU but 17m is such a cool band. Just wondering? I've a 80m that's still not loaded and was wondering if there was hope of 17m? or space for the code even?

Steve/n0tu

505. Re: Any chance of pushing ATS to 17m?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-27 15:56:56 UTC
From: lutz_bergner
Topic: 504 Message: 505

Hi Steve,

At the moment I am working on it. I even intend to push it up to 15m. Just purchased a new 60MHz crystal oszillator and a 75MHz version of the AD9834. Steven suspected that even the BRU version might cope with 60Mhz clock. When I studied Stevens program source I found commented out code to extend the ATS-3 to 160,17 and 15m. Obviously the CO has to be taken up in frequency to meet Mr. Nyquist but with 50MHz you should reach at least 17m. I already designed a new spurfilter for the AD9834.Now I am still waiting for some AMIDON cores to come and will do this major mod at one of the next weekends. Lets keep fingers crossed that all goes well. removing the tiny DDS will be not too easy. Will share all results when I have proved ones AND can recommend the mod ;-).

72s

Lutz

--- In AT_Sprint@yahoogroups.com, "steve_n0tu" <n0tu.qrp@...> wrote:
>
> Steve, Any chance of pushing ATS to 17m? I know this is the upper
> limit or maybe over the limit for the CPU but 17m is such a cool band.
> Just wondering? I've a 80m that's still not loaded and was wondering
> if there was hope of 17m? or space for the code even?
>
> Steve/n0tu
>

506. Re: [AT_Sprint] Any chance of pushing ATS to 17m?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-27 16:06:49 UTC
From: Michael Harnage
Topic: 504 Message: 506

One could do it. Because of the way the bands are
"sensed" you are limited to 4 bands to be autosensed
so you would have to do 40/30/20/17 or similiar. For
this reason it would not really affect code space,
just change one of the current bands....

The problem with this, is not the CPU but the clock
driving the DDS. It is pushing it to do 20M on the
ATS3 with the 40MHz clock. It would be pushing it even
farther to try 17M on the ATS3A with a 50MHz dds
clock.

For this reason I would not recommend it.

-mike/w1mt

--- steve_n0tu <n0tu.qrp@...> wrote:

> Steve, Any chance of pushing ATS to 17m? I know this
> is the upper
> limit or maybe over the limit for the CPU but 17m is
> such a cool band.
> Just wondering? I've a 80m that's still not loaded
> and was wondering
> if there was hope of 17m? or space for the code
> even?
>
> Steve/n0tu
>

Do you Yahoo!?
Everyone is raving about the all-new Yahoo! Mail beta.
http://new.mail.yahoo.com

507. Re: [AT_Sprint] Any chance of pushing ATS to 17m?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-27 15:31:22 UTC
From: Lutz Bergner
Topic: 504 Message: 507

Hi Steve,

At the moment I am working on it. I even intend to push it up to 15m. Just purchased a new 60MHz crystal oszillator and a 75MHz version of the AD9834. Steven suspected that even the BRU version might cope with 60Mhz clock. When I studied Stevens program source I found commented out code to extend the ATS-3 to 160,17 and 15m. Obviously the CO has to be taken up in frequency to meet Mr. Nyquist but with 50MHz you should reach at least 17m. I already designed a new spurfilter for the AD9834.Now I am still waiting for some AMIDON cores to come and will do this major mod at one of the next weekends. Lets keep fingers crossed that all goes well. removing the tiny DDS will be not too easy. Will share all results when I have proved ones AND can recommend the mod ;-).

72s

Lutz

Am Montag, den 27.11.2006, 14:53 +0000 schrieb steve_n0tu:
> Steve, Any chance of pushing ATS to 17m? I know this is the upper
> limit or maybe over the limit for the CPU but 17m is such a cool
> band.
> Just wondering? I've a 80m that's still not loaded and was wondering
> if there was hope of 17m? or space for the code even?
>
> Steve/n0tu

508. Re: [AT_Sprint] Any chance of pushing ATS to 17m?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-27 17:04:24 UTC
From: Michael Harnage
Topic: 504 Message: 508

Hmmmm, I'll be darned, AD is indeed spec'ing the 9834
to 75MHz now. Should be able to get 15M easly with a
75MHz clock in there. Might have to just do a little
experimenting here too.

Thanks Lutz!

-mike

--- Lutz Bergner <l.bergner@...> wrote:

> Just purchased a new 60MHz crystal oszillator and a
> 75MHz version of the
> AD9834.

Cheap talk?
Check out Yahoo! Messenger's low PC-to-Phone call rates.
http://voice.yahoo.com

509. Waterproof, uncrushable case for AT Sprint

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-27 19:01:42 UTC
From: kb2tqx
Topic: 509 Message: 509

I was doing some measuring up in preparation for receipt of my forthcoming AT Sprint III, and found out that a polycarbonate, watertight case I had on hand is a perfect fit for an Altoids can.

The box is viewable here:
http://www.otterbox.com/products/otterbox/1000/index.htm

When placed in the Otter Box 1000 an Altoids can has approx 3/8" clearance on top and 3/8" length ways, so there should be room for the AT Sprint III RCA connector sticking out the side.

The Otter Box 1000, with lanyard attached, weighs in at 5.2 ounces, so you might not want to count that as part of your uberlight station, but it's nice to have an uncrushable, watertight container for your AT Sprint when you are out on those rigorous hikes.

Usual statement. No affiliation or financial interest in Otter Box, I just think they are "way cool" containers.

I use an Otter Box 2000 to hold my Yaesu VR-500 miniature communications receiver. There's room in there also for a small BNC telecopic antenna, spare batteries and 30 feet or so of some small gage insulated wire for a long-wire antenna.

72/3,
Dave
KB2TQX

510. Re: Just Finished My ATS-3A Last Night - Great DX!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-27 19:02:19 UTC
From: steve_n0tu
Topic: 503 Message: 510

>my first-ever QSO with the ATS-3A was IR4M.

Congrates Andy!!! I know the thrill of first Qs w/ATS it's a huge
rush! ...especially after laboring over those tiny parts for hours.

Nice photos! Have you decided on how your gonna package it?

Steve/n0tu

511. Re: [AT_Sprint] Re: Just Finished My ATS-3A Last Night - Great DX!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-27 20:17:45 UTC
From: Michael Harnage
Topic: 503 Message: 511

From the photos it looks like the antenna has a
special connector and the other standard jacks are not
installed.

One might surmise that Andy is readying for a run at
lowering his already low weight for Spartan Sprinting?
:)

-mike/w1mt

--- steve_n0tu <n0tu.qrp@...> wrote:

>
> Nice photos! Have you decided on how your gonna
> package it?
>

Want to start your own business?
Learn how on Yahoo! Small Business.
http://smallbusiness.yahoo.com/r-index

512. Re: [AT_Sprint] Waterproof, uncrushable case for AT Sprint

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-27 22:06:06 UTC
From: Mark Brueggemann
Topic: 509 Message: 512

--- kb2tqx <kb2tqx@...> wrote:

> polycarbonate,watertight case I had on hand is a perfect
> fit for an Altoids can.
>
> The box is viewable here:
> http://www.otterbox.com/products/otterbox/1000/index.htm

I've seen those for GPS's before, didn't know they offered
different form factors. Looks nice. They also have one
to hold your cigars, too!

Mark K5LXP
Albuquerque, NM

513. RE: [AT_Sprint] Re: Just Finished My ATS-3A Last Night - Great DX!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-28 01:55:21 UTC
From: andrew.macallister@emersonprocess.com
Topic: 503 Message: 513
Attachments: 1 described; binary payloads are missing from this source WARC

So True! It won't be the ultimate in weight loss, but YES I am working toward a Very Light-Weight, but highly functional, contender for the Spartan Sprints. I must have a paddle, and not just tap on the rig's buttons. I had a nice design in my ATS-3, but it is made of Stainless Steel relay parts. This one will once again be built in, but will have lighter components. I would like to go with a single earbud, but I MUCH prefer one for each ear. I will also be operating with less power. That may be a problem, but I will only go up to 3 Li-Ion batts if I must. For now, I will try 2 batteries for 7.4 VDC.
:-)
Andy

From: AT_Sprint@yahoogroups.com on behalf of Michael Harnage
Sent: Mon 11/27/2006 2:17 PM
To: AT_Sprint@yahoogroups.com
Subject: Re: [AT_Sprint] Re: Just Finished My ATS-3A Last Night - Great DX!

From the photos it looks like the antenna has a
special connector and the other standard jacks are not
installed.

One might surmise that Andy is readying for a run at
lowering his already low weight for Spartan Sprinting?
:)

-mike/w1mt

--- steve_n0tu <n0tu.qrp@... <mailto:n0tu.qrp%40gmail.com> > wrote:

>
> Nice photos! Have you decided on how your gonna
> package it?
>

Want to start your own business?
Learn how on Yahoo! Small Business.
http://smallbusiness.yahoo.com/r-index <http://smallbusiness.yahoo.com/r-index>

514. Re: Waterproof, uncrushable case for AT Sprint

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-28 14:54:05 UTC
From: fixnwrtr
Topic: 509 Message: 514

When you have pictures available, I'd like to borrow them to add to an
article for a magazine, if you don't mind.

73, as always...

Jackie AC0CA

--- In AT_Sprint@yahoogroups.com, "kb2tqx" <kb2tqx@...> wrote:
>
> I was doing some measuring up in preparation for receipt of my
> forthcoming AT Sprint III, and found out that a polycarbonate,
> watertight case I had on hand is a perfect fit for an Altoids can.
>
> The box is viewable here:
> http://www.otterbox.com/products/otterbox/1000/index.htm
>
> When placed in the Otter Box 1000 an Altoids can has approx 3/8"
> clearance on top and 3/8" length ways, so there should be room for the
> AT Sprint III RCA connector sticking out the side.
>
> The Otter Box 1000, with lanyard attached, weighs in at 5.2 ounces, so
> you might not want to count that as part of your uberlight station,
> but it's nice to have an uncrushable, watertight container for your AT
> Sprint when you are out on those rigorous hikes.
>
> Usual statement. No affiliation or financial interest in Otter Box, I
> just think they are "way cool" containers.
>
> I use an Otter Box 2000 to hold my Yaesu VR-500 miniature
> communications receiver. There's room in there also for a small BNC
> telecopic antenna, spare batteries and 30 feet or so of some small
> gage insulated wire for a long-wire antenna.
>
> 72/3,
> Dave
> KB2TQX
>

515. Re: Any chance of pushing ATS to 17m?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-28 19:34:26 UTC
From: w1mt
Topic: 504 Message: 515

Hi Lutz,

I was wondering if you had checked out the frequency limitations of the 74HC02 and 2n7000s in the transmitter? Also, what effect will higher frequencies have on the power handling capability of the 2n7000s? I think the 74HC02 will be fine at the higher freqs, but am not sure how close Steve designed the power handling of the FETs. Have seen several cases where the FETs seemed to blow easily and wonder if the higher freqs might make them more fragile.

-mike/w1mt

--- In AT_Sprint@yahoogroups.com, Lutz Bergner <l.bergner@...> wrote:
>
> Hi Steve,
>
> At the moment I am working on it. I even intend to push it up to 15m.
> Just purchased a new 60MHz crystal oszillator and a 75MHz version of the
> AD9834.

516. ATS base station accessory

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-28 21:04:09 UTC
From: Steven Weber
Topic: 504 Message: 516

Circuit boards and all parts are now in hand. Just need to finish the instruction manual and start bagging parts.

So, you all can start ordering them now. Please refrain from using paypal if you can. I'll put a picture of the unit up on my web site in the next day or two.

ATS Base Station Accessory:

Four digit LED display
Frequency counter for direct reading dial on all bands.
0-9.99 watt RF power meter. Forward and Reverse power readings (Not SWR)
2 Watt audio amp for driving a speaker
6 to 11 volt variable regulator for variable power output.

$45.00 postpaid in USA and Canada
$3.00 DX airmail postage

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

517. Re: [AT_Sprint] Any chance of pushing ATS to 17m?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-28 20:29:29 UTC
From: Steven Weber
Topic: 504 Message: 517

>Hmmmm, I'll be darned, AD is indeed spec'ing the 9834
>to 75MHz now. Should be able to get 15M easly with a
>75MHz clock in there. Might have to just do a little
>experimenting here too.

Interesting, wonder if they found it would run faster or changed the fab process? Expect a significant increase in current though. In addition to changing the reference clock and output filter, the 74HC02 will have to be changed to a 74AC02, as the HC02 falls short driving the 2N7000's above 14 MHz.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

518. Re: [AT_Sprint] ATS base station accessory

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-28 21:42:07 UTC
From: Terry WAØITP
Topic: 504 Message: 518

Thank you Steve, consider the check in the mail..

72 73
Terry, WAØITP
www.wa0dx.org/wa0itp
www.4sqrp.com

----- Original Message -----
From: Steven Weber
To: AT_Sprint@yahoogroups.com
Sent: Tuesday, November 28, 2006 3:04 PM
Subject: [AT_Sprint] ATS base station accessory

Circuit boards and all parts are now in hand. Just need to finish the
instruction manual and start bagging parts.

So, you all can start ordering them now. Please refrain from using paypal
if you can. I'll put a picture of the unit up on my web site in the next
day or two.

ATS Base Station Accessory:

Four digit LED display
Frequency counter for direct reading dial on all bands.
0-9.99 watt RF power meter. Forward and Reverse power readings (Not SWR)
2 Watt audio amp for driving a speaker
6 to 11 volt variable regulator for variable power output.

$45.00 postpaid in USA and Canada
$3.00 DX airmail postage

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

No virus found in this incoming message.
Checked by AVG Free Edition.
Version: 7.5.430 / Virus Database: 268.14.19/555 - Release Date: 11/27/2006 6:09 PM

519. Re: [AT_Sprint] ATS base station accessory

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-28 23:04:06 UTC
From: Karl Larsen
Topic: 504 Message: 519

Hi Steven I met the post lady as I entered the street and handed her
your letter and got my mail. The check is in the hands of the post
office now.

Karl

Steven Weber wrote:
> Circuit boards and all parts are now in hand. Just need to finish the
> instruction manual and start bagging parts.
>
> So, you all can start ordering them now. Please refrain from using paypal
> if you can. I'll put a picture of the unit up on my web site in the next
> day or two.
>
> ATS Base Station Accessory:
>
> Four digit LED display
> Frequency counter for direct reading dial on all bands.
> 0-9.99 watt RF power meter. Forward and Reverse power readings (Not SWR)
> 2 Watt audio amp for driving a speaker
> 6 to 11 volt variable regulator for variable power output.
>
> $45.00 postpaid in USA and Canada
> $3.00 DX airmail postage
>
>
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://www.qsl.net/kd1jv/
> http://kd1jv.qrpradio.com
>
>
>
> Yahoo! Groups Links
>
>
>
>
>
>
>

520. Re: [AT_Sprint] Re: Any chance of pushing ATS to 17m?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-29 07:12:47 UTC
From: Lutz Bergner
Topic: 504 Message: 520

Hi Mike,

I will follow Steve's hint and replace the HC02 with AC02. That will be crucial regarding the life of the 2N7000s too. The question is if they can pass their linear operating range fast enough to survive due to the increasing influence of the capacities. Anyway by replacing the AD and the HC02 nothing is lost. If all fails I 'll be happy with 17m added. I think , testing the PA on a piece of PCB will be a good idea. Then I will know how far we can go.

72s

Lutz

Am Dienstag, den 28.11.2006, 19:34 +0000 schrieb w1mt:
> Hi Lutz,
>
> I was wondering if you had checked out the frequency limitations of
> the 74HC02 and 2n7000s in the transmitter? Also, what effect will
> higher frequencies have on the power handling capability of the
> 2n7000s? I think the 74HC02 will be fine at the higher freqs, but am
> not sure how close Steve designed the power handling of the FETs. Have
> seen several cases where the FETs seemed to blow easily and wonder if
> the higher freqs might make them more fragile.
>
> -mike/w1mt

521. Re: ATS 3A First QSO

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-29 07:49:41 UTC
From: karllued
Topic: 454 Message: 521

Does anyone know what voltage a LiPo battery runs? I can purchase a Lithium Polymer battery and charger from the company I work for at a good price. Each "9V" battery is rated at 500MaH, and of course would fit inside the radio housing! I was wondering if they hold their voltage until fully discharged as well? I will try to ask one of our engineers at work if I can't find an answer.--- In AT_Sprint@yahoogroups.com, Mark Brueggemann <qrq_cw@...> wrote:

>
>
>
> --- BPCI@... wrote:
>
> > my well-used NIMH 9 volt was good to use--it isn't.
>
> Is it even 9V? I know the NiCd 9V batteries are really
> only 7.5V.
>
>
>
>
> Mark K5LXP
> Albuquerque, NM
>

522. Re: ATS 3A First QSO

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-29 14:07:46 UTC
From: chris reeves
Topic: 454 Message: 522

http://www.ae5x.com
This web sight has good data on diferent types of batteries and
there life and operational caricteristics.

--- In AT_Sprint@yahoogroups.com, "karllued" <karllued@...> wrote:
>
> Does anyone know what voltage a LiPo battery runs? I can purchase
a
> Lithium Polymer battery and charger from the company I work for at
a
> good price. Each "9V" battery is rated at 500MaH, and of course
> would fit inside the radio housing! I was wondering if they hold
> their voltage until fully discharged as well? I will try to ask
one
> of our engineers at work if I can't find an answer.--- In
> AT_Sprint@yahoogroups.com, Mark Brueggemann <qrq_cw@> wrote:
> >
> >
> >
> > --- BPCI@ wrote:
> >
> > > my well-used NIMH 9 volt was good to use--it isn't.
> >
> > Is it even 9V? I know the NiCd 9V batteries are really
> > only 7.5V.
> >
> >
> >
> >
> > Mark K5LXP
> > Albuquerque, NM
> >
>

523. Batteries - RE: [AT_Sprint] Re: ATS 3A First QSO

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-29 14:25:28 UTC
From: andrew.macallister@emersonprocess.com
Topic: 523 Message: 523

****
No virus was detected in the attachment no filename
No virus was detected in the attachment no filename
**********-**********

I have been dealing with http://www.batteriesamerica.com
<http://www.batteriesamerica.com/> for MANY years. My ATS-3 has three
300 mAh Platinum Polymer batteries running 3.7VDC each. These are
excellent batteries. I am going to try using two 200 mAh batteries in my
ATS-3A. The lower capacity batteries do not handle heavy current loads,
but I am going for less weight. The voltage holds up well until the
batteries are nearly depleted, BUT they should NEVER be depleted below
the specs that come with the battery. Use only Li-Po chargers.
Protection circuits are available to prevent overcharging and
low-voltage depletion. I did have one of my 300 mAh batteries go too low
once. It puffed up and had to be removed and thrown out ASAP. I had the
batteries epoxied in the top of the Altoids box. It was an opportunity
to go from Wintergreen to Ginger :-).

My ATS-3A is shaping up well, but won't be the world's lightest rig. I
will post some photos when it is complete.

Andy W5ACM

From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com] On
Behalf Of karllued
Sent: Wednesday, November 29, 2006 1:50 AM
To: AT_Sprint@yahoogroups.com
Subject: [AT_Sprint] Re: ATS 3A First QSO

Does anyone know what voltage a LiPo battery runs? I can purchase a
Lithium Polymer battery and charger from the company I work for at a
good price. Each "9V" battery is rated at 500MaH, and of course
would fit inside the radio housing! I was wondering if they hold
their voltage until fully discharged as well? I will try to ask one
of our engineers at work if I can't find an answer.--- In
AT_Sprint@yahoogroups.com <mailto:AT_Sprint%40yahoogroups.com> , Mark
Brueggemann <qrq_cw@...> wrote:
>
>
>
> --- BPCI@... wrote:
>
> > my well-used NIMH 9 volt was good to use--it isn't.

>
> Is it even 9V? I know the NiCd 9V batteries are really
> only 7.5V.
>
>
>
>
> Mark K5LXP
> Albuquerque, NM
>

524. Re: [AT_Sprint] Anyone do this?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-29 15:23:29 UTC
From: BPCI@aol.com
Topic: 524 Message: 524

Has anyone made a PCB with four receptacles and a switch to hold and switch between all four band filters? It seems it would be a great addition to the base station kit Steve now has. The older I get, the more difficult it seems to be to switch out the different band boards...73, Ci

Ci Jones, WU7R
FISTS #10789, CC #1853
NAQCC #306
ARCI #12163
SKCC #22, C#38
FP #1442

525. LiPo Battery Fuel Gauge PCB

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-29 15:17:28 UTC
From: kb2tqx
Topic: 525 Message: 525

Take a look at these battery fuel gauge PCBs at BatterySpace.com:

https://www.batteryspace.com/index.asp?PageAction=VIEWPROD&ProdID=2775

They are designed to plug into a multi-cell LiPo pack protection PCB, but from the specs it looks as if they could just be placed in any circuit that is fed by aLiPo pack, across the voltage supply.

Does anyone have any experience with these little guys. It looks like a super lightweight PCB and could be made to fit nicely into an AT Sprint.. At $3.95 + shipping each they might be some cheap insurance against accidentally over-discharging your LiPo pack. To get around the relatively large shipping cost from BatterySpace for a single item, this might make a nice group buy item for AT Sprint owners. The PCB is so small and light I'm sure could be forwarded for a couple of 1st Class stamps in a little padded mailer.

I am just now putting together a personal order to BatterySpace, anyone interested?

72/3,

Dave
KB2TQX

kb2tqx@...
2006-11-29

526. Re: [AT_Sprint] Anyone do this?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-29 17:51:48 UTC
From: Michael Harnage
Topic: 524 Message: 526

Only in my head. :)

How bout a daughter board the same size as the main board that plugs into the main board. On this daughterboard would be filters for 8 bands (assuming that you have already upgraded your dds, oscillator and NOR gate. Also on this board would be another MPU that talked to the MPU on the main board serially thru the two ports currently used to sense the band module. The daughtercard MPU would switch relays and analog switches to select the correct filters for current band in use. Of course the firmware will have to change and new firmware written for the daughterboard. Not sure if everything would fit on the daughter board--that would be a lot of roids and such to populate along with relays. Perhaps some ecominization could occur?

These are ideas that have been percolating in my head for a long time. Actually, originally was only thinking of a 4 band board but with the recent realization that the 9834 has been upgraded why not dream big? Only band not included would be 10M (and of course 60M).

Not sure I could pull this off all on my own and don't think there would be a large market but darn wouldn't it be slick!

Just a thinkin out loud,

-mike/w1mt
--- BPCI@... wrote:

> Has anyone made a PCB with four receptacles and a
> switch to hold and switch
> between all four band filters?

_____
Do you Yahoo!?
Everyone is raving about the all-new Yahoo! Mail beta.
http://new.mail.yahoo.com

527. Re: [AT_Sprint] ATS base station accessory

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-29 18:48:20 UTC
From: Roland Whitsitt
Topic: 504 Message: 527

Yoohoo! Got my order in! Thanks Steven
N5VWN Roland in Californy
----- Original Message -----

Circuit boards and all parts are now in hand. Just need to finish the instruction manual and start bagging parts.

So, you all can start ordering them now. Please refrain from using paypal if you can. I'll put a picture of the unit up on my web site in the next day or two.

ATS Base Station Accessory:

Four digit LED display
Frequency counter for direct reading dial on all bands.
0-9.99 watt RF power meter. Forward and Reverse power readings (Not SWR)
2 Watt audio amp for driving a speaker
6 to 11 volt variable regulator for variable power output.

$45.00 postpaid in USA and Canada
$3.00 DX airmail postage

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

528. Re: ATS base station accessory

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-29 19:40:55 UTC
From: ab4vf
Topic: 504 Message: 528

Thank you, also, Steve. My check is in the mail

72/73

Charles, AB4VF

529. Re: [AT_Sprint] Anyone do this?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-29 22:33:39 UTC
From: Steven Weber
Topic: 524 Message: 529

>How bout a daughter board the same size as the main
>board that plugs into the main board. On this
>daughterboard would be filters for 8 bands (assuming

Just the relays alone would take up more space than the main board! Then
you have to add all the filters, both input and output. Plus it really
takes 16 relays, not 8, since I have not found a good way to electronically
switch the input filters yet. The other problem is the PA doesn't seem to
like long connections going to the filters. Belive me, I've looked into
this and it turned into way too big a can of worms.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

530. Re: [AT_Sprint] Anyone do this?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-29 22:47:01 UTC
From: w9ya@arrl.net
Topic: 524 Message: 530

Hey Gang;

Actually, I would imagine that filters for 17/15 could be combined, and thereby lower the number of networks required.

Also, and this is just my opinion, but field packable antennas for 160 are a real problem to make work well and still be a "hike in" item; so not including 160 into the mix also seems logical to me. This would further lower the number of networks required.

Vy 72;

Bob
w9ya

> Only in my head. :)
>
> How bout a daughter board the same size as the main
> board that plugs into the main board. On this
> daughterboard would be filters for 8 bands (assuming
> that you have already upgraded your dds, oscillator
> and NOR gate. Also on this board would be another MPU
> that talked to the MPU on the main board serially thru
> the two ports currently used to sense the band module.
> The daughtercard MPU would switch relays and analog
> switches to select the correct filters for current
> band in use. Of course the firmware will have to
> change and new firmware written for the daughterboard.
> Not sure if everything would fit on the daughter
> board--that would be a lot of roids and such to
> populate along with relays. Perhaps some ecominization
> could occur?
>
> These are ideas that have been percolating in my head
> for a long time. Actually, originally was only
> thinking of a 4 band board but with the recent
> realization that the 9834 has been upgraded why not
> dream big? Only band not included would be 10M (and of
> course 60M).
>
> Not sure I could pull this off all on my own and don't
> think there would be a large market but darn wouldn't
> it be slick!
>
> Just a thinkin out loud,
>

> -mike/w1mt
> --- BPCI@... wrote:
>
>> Has anyone made a PCB with four receptacles and a
>> switch to hold and switch
>> between all four band filters?
>
>
>
>

531. AA1 Altoids Alternative Enclosure

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-30 00:27:19 UTC
From: camqrp
Topic: 531 Message: 531

Has anyone stuffed his or her ATS rig into one of American Morse's new crushproof boxes yet?

Just curious.

- Cam N6GA

532. Re: [AT_Sprint] AA1 Altoids Alternative Enclosure

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-30 01:58:09 UTC
From: BPCI@aol.com
Topic: 531 Message: 532

In a message dated 11/29/2006 5:34:18 PM Mountain Standard Time,
camqrp@... writes:

Has anyone stuffed his or her ATS rig into one of American Morse's new
crushproof boxes yet?

Yes, mine is in the new enclosure. It works very well, but you have to buy
and attach feet to it. Other than that, it works very nicely...72/73, Ci

Ci Jones, WU7R
FISTS #10789, CC #1853
NAQCC #306
ARCI #12163
SKCC #22, C#38
FP #1442

533. Base Station Accessory

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-30 02:00:34 UTC
From: kr5l
Topic: 533 Message: 533

Hi Steve and ATS3 fans,

Just a quick note to say thanks to Steve for designing the base station accessory. A money order will be in the mail first thing in the morning. I just ordered a second ATS3 two days ago. I didn't know about the Base Station Kit until I read the relector today. Anyway, I am looking forward to receiving the kits.

Keep the solder fumes aloft,

72's

Jerry Henshaw
KR5L

534. Re: AA1 Altoids Alternative Enclosure

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-30 03:46:58 UTC
From: camqrp
Topic: 531 Message: 534

--- In AT_Sprint@yahoogroups.com, BPCI@... wrote:

> Yes, mine is in the new enclosure. It works very well, but you have
to buy
> and attach feet to it. Other than that, it works very
nicely...72/73, Ci
>
> Ci Jones, WU7R
> FISTS #10789, CC #1853
> NAQCC #306
> ARCI #12163
> SKCC #22, C#38
> FP #1442
>

Ci --

Great! Did you change the board at all, or put it in just as is?
Which side of the box did you put the feet on? And of course, pictures?

Thanks,

Cam N6GA

535. Re: [AT_Sprint] Re: AA1 Altoids Alternative Enclosure

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-30 04:22:04 UTC
From: BPCI@aol.com
Topic: 531 Message: 535

In a message dated 11/29/2006 9:09:00 PM Mountain Standard Time,
camqrp@... writes:

Did you change the board at all, or put it in just as is?
Which side of the box did you put the feet on? And of course, pictures?

I had to file one corner off of the board, but that could be because of my sloppy drilling of holes. The four buttons are on what would be considered the bottom of the case (just as with the altoid can)., and the top (which becomes the bottom while operating) easily opens by loosening the two screws and sliding the panel to one side to change band filters. It is on this top (now bottom) that the feet are mounted and must exceed the height of the two screws holding the plate in place. I don't have pictures, but it looks so much like the altoid enclosure that they would make little difference. I am very please with the case although it would have been much nicer had it been pre-drilled.

Ci Jones, WU7R
FISTS #10789, CC #1853
NAQCC #306
ARCI #12163
SKCC #22, C#38
FP #1442

536. Re: [AT_Sprint] Anyone do this?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-30 15:43:39 UTC
From: Steven Weber
Topic: 524 Message: 536

>Actually, I would imagine that filters for 17/15 could be combined, and
>thereby lower the number of networks required.
>
I thought so too, but turns out if the filters are not optimized for each
band, effiecentcy and power output suffers to an unacceptable degree.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

537. I've Got My ATS IIIA Kit!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-30 16:40:44 UTC
From: kb2tqx
Topic: 537 Message: 537

My ATS IIIA kit arrived in yesterday's US Mail. Thank you Steve for your prompt handling of the order. Much appreciated.

This is going to be my first major SMT kit build, so I am going to take my time - check twice solder once, for sure.

I am in the middle of fixing the HV supply on my Tek 465M scope, so I am going to complete that first. Then "clear the decks" and set up a clean "walled" work space. Install my never-been-used, super-fine pointy tip in my OK Industries solder iron, turn on the bright desklamp, break out the magnifier headset and go to work.

I haven't been this excited over a kit in a while.

Dave
KB2TQX

538. Re: [AT_Sprint] I've Got My ATS IIIA Kit!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-30 18:03:34 UTC
From: Pete Meier
Topic: 537 Message: 538

Don't forget the beeswax and toothpicks to pick & place those teeny parts.

Pete WK8S

On Thursday, November 30, 2006, at 11:53AM, "kb2tqx" <kb2tqx@...> wrote:
>......... Then "clear the decks" and set up a
>clean "walled" work space. Install my never-been-used, super-fine
>pointy tip in my OK Industries solder iron, turn on the bright
>desklamp, break out the magnifier headset and go to work.
>
>I haven't been this excited over a kit in a while.
>
>Dave
>KB2TQX
>
>

539. Re: [AT_Sprint] I've Got My ATS IIIA Kit!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-30 18:23:29 UTC
From: Karl Larsen
Topic: 537 Message: 539

kb2tqx wrote:
> My ATS IIIA kit arrived in yesterday's US Mail. Thank you Steve for
> your prompt handling of the order. Much appreciated.
>
> This is going to be my first major SMT kit build, so I am going to
> take my time - check twice solder once, for sure.
>
> I am in the middle of fixing the HV supply on my Tek 465M scope, so I
> am going to complete that first. Then "clear the decks" and set up a
> clean "walled" work space. Install my never-been-used, super-fine
> pointy tip in my OK Industries solder iron, turn on the bright
> desklamp, break out the magnifier headset and go to work.
>
Before starting to work Dave print out the Manual and read it about
3 times :-)
You will be glad you did.

72 Karl K5DI

> I haven't been this excited over a kit in a while.
>
> Dave
> KB2TQX
>
>
>
>
> Yahoo! Groups Links
>
>
>
>
>
>

540. Re: [AT_Sprint] I've Got My ATS IIIA Kit!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-30 18:50:26 UTC
From: BPCI@aol.com
Topic: 537 Message: 540

In a message dated 11/30/2006 11:39:09 AM Mountain Standard Time,
k5di@... writes:

Before starting to work Dave print out the Manual and read it about
3 times :-)
You will be glad you did.

Also be careful when you solder the "link" leads on toroids to have them in
the right place. And if you think you are excited by the kit, just wait until
you get it on the air. They are fantastic radios...

Ci Jones, WU7R
FISTS #10789, CC #1853
NAQCC #306
ARCI #12163
SKCC #22, C#38
FP #1442

541. Re: [AT_Sprint] I've Got My ATS IIIA Kit!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-30 19:23:52 UTC
From: Gil Stacy
Topic: 537 Message: 541
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

542. Re: [AT_Sprint] I've Got My ATS IIIA Kit!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-11-30 22:32:46 UTC
From: kb2tqx
Topic: 537 Message: 542

Thanks for all the encoragement guys!

I'll add the beeswax and toothpicks to my list. I have already printed out the whole manual, and even put it into page protectors (2 sheets in one sleeve, back to back) and put it in a nice skinny binder, so I can pick it up and read it whenever. I ALWAYS read through assembly manuals at least twice before building to get a sense of what I am going to be doing before I get in there and follow the detailed instructions step by step. I like to get an overview before I start, kinda build it in my head first.

Steve, you do a nice manual. It's got enough diagrams and pics so that you don't get too robotic about the steps of installation and go all goofy. Thanks for taking the time to do a good manual.

Dave
kb2tqx
kb2tqx@...
2006-11-30

543. Re: [AT_Sprint] Anyone do this?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-01 16:38:46 UTC
From: w9ya@arrl.net
Topic: 524 Message: 543

>>Actually, I would imagine that filters for 17/15 could be combined, and
>> thereby lower the number of networks required.
>>
> I thought so too, but turns out if the filters are not optimized for
> each band, effiecentcy and power output suffers to an unacceptable
> degree. 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://www.qsl.net/kd1jv/
> http://kd1jv.qrpradio.com

Yeah...the class d and e "-ish" finals could/would suffer that way. I gotta start thinking less of class a, b, and to a certain extent; class c....hi hi....

Vy 72;

Bob
w9ya

544. 40 meter output:

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-01 18:50:17 UTC
From: chris reeves
Topic: 544 Message: 544

My output is over 3 watts on all bands exept 40m, 2 watts at about 9 volts supply. I have checked all values and recounted turns and moved them a little. anyone else seen this?

545. Re: [AT_Sprint] 40 meter output:

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-01 19:34:12 UTC
From: Michael Harnage
Topic: 544 Message: 545

That is not bad for 9V supply. I would check output at
12V and if close to 4.5W to 5W wouldn't worry about
it.

If you want to get picky:

One thing you can do is check at various frequencies
within the 40M band to find where the peak is. That
will tell you whether you need to add or subtract
turns from LF2.

-mike/w1mt

--- chris reeves <kr4ez@...> wrote:

> My output is over 3 watts on all bands exept 40m, 2
> watts at about 9
> volts supply.

Cheap talk?
Check out Yahoo! Messenger's low PC-to-Phone call rates.
http://voice.yahoo.com

546. Re: [AT_Sprint] 40 meter output:

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-01 19:41:43 UTC
From: Lutz Bergner
Topic: 544 Message: 546

Hi Chris

Change C2F to 820p or solder a 120p NPO chip in parallel the existing
680p. That helps a lot.

72s

Lutz,DL2HRP

Am Freitag, den 01.12.2006, 18:50 +0000 schrieb chris reeves:
> My output is over 3 watts on all bands exept 40m, 2 watts at about 9
> volts supply. I have checked all values and recounted turns and moved
> them a little. anyone else seen this?

547. RE: [AT_Sprint] 40 meter output:

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-01 20:30:07 UTC
From: andrew.macallister@emersonprocess.com
Topic: 544 Message: 547
Attachments: 1 described; binary payloads are missing from this source WARC

Good point - Find the peak if possible. I must have wound all of my coils just right. With the 9V battery, all bands provided slightly more than 3W.
Andy W5ACM

From: AT_Sprint@...m on behalf of Michael Harnage
Sent: Fri 12/1/2006 1:34 PM
To: AT_Sprint@yahoogroups.com
Subject: Re: [AT_Sprint] 40 meter output:

That is not bad for 9V supply. I would check output at
12V and if close to 4.5W to 5W wouldn't worry about
it.

If you want to get picky:

One thing you can do is check at various frequencies
within the 40M band to find where the peak is. That
will tell you whether you need to add or subtract
turns from LF2.

-mike/w1mt

--- chris reeves <kr4ez@... <mailto:kr4ez%40aol.com> > wrote:

> My output is over 3 watts on all bands exept 40m, 2
> watts at about 9
> volts supply.

Cheap talk?
Check out Yahoo! Messenger's low PC-to-Phone call rates.
http://voice.yahoo.com <http://voice.yahoo.com>

548. Re: 40 meter output:

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-01 21:51:53 UTC
From: chris reeves
Topic: 544 Message: 548

how will this afect the puritty of the output? Is this a know problem
or did I screw up? Would adding 1 turn to L1 do the same thing?

--- In AT_Sprint@yahoogroups.com, Lutz Bergner <l.bergner@...> wrote:
>
> Hi Chris
>
> Change C2F to 820p or solder a 120p NPO chip in parallel the existing
> 680p. That helps a lot.
>
> 72s
>
> Lutz,DL2HRP
>
> Am Freitag, den 01.12.2006, 18:50 +0000 schrieb chris reeves:
> > My output is over 3 watts on all bands exept 40m, 2 watts at about
9
> > volts supply. I have checked all values and recounted turns and
moved
> > them a little. anyone else seen this?
>

549. Re: 40 meter output:

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-01 22:14:11 UTC
From: chris reeves
Topic: 544 Message: 549

how will this afect the puritty of the output? Is this a know problem
or did I screw up? Would adding 1 turn to L1 do the same thing?

--- In AT_Sprint@yahoogroups.com, Lutz Bergner <l.bergner@...> wrote:
>
> Hi Chris
>
> Change C2F to 820p or solder a 120p NPO chip in parallel the existing
> 680p. That helps a lot.
>
> 72s
>
> Lutz,DL2HRP
>
> Am Freitag, den 01.12.2006, 18:50 +0000 schrieb chris reeves:
> > My output is over 3 watts on all bands exept 40m, 2 watts at about
9
> > volts supply. I have checked all values and recounted turns and
moved
> > them a little. anyone else seen this?
>

550. Re: [AT_Sprint] Re: 40 meter output:

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-02 08:47:18 UTC
From: Lutz Bergner
Topic: 544 Message: 550

Its not my invention, David W6EMD did a carefully optimizing of all LP Modules. The new value for C2F was his mod for 40m. I did it on both of my 40m modules and it made a great difference. You may find Davids file somewhere in this yahoo group.

72s

Lutz,DL2HRP

Am Freitag, den 01.12.2006, 22:14 +0000 schrieb chris reeves:
> how will this afect the puritty of the output? Is this a know problem
> or did I screw up? Would adding 1 turn to L1 do the same thing?
>
> --- In AT_Sprint@yahoogroups.com, Lutz Bergner <l.bergner@...> wrote:

551. Re: 40 meter output:

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-02 15:47:46 UTC
From: chris reeves
Topic: 544 Message: 551

WOW! Thanks for the tip David W6EMD, and Lutz,DL2HRP! Output went from 2.3 to 3.3 at 9.1V. I used 120 pf npo 50 volt surface mount cap between c2f pins on the back of the board. I also checked, befor the mod, the output at powerup freq. and 100 khz up and it was .3 watts higher. I also modled this filter, and mod, on elsie and looked ok. also thanks to everyone who had sugestions. this is the only blog i have been on and am very pleased with the group. Hope to be able to help yall in the future!

--- In AT_Sprint@yahoogroups.com, Lutz Bergner <l.bergner@...> wrote:
>
> Its not my invention, David W6EMD did a carefully optimizing of all LP
> Modules. The new value for C2F was his mod for 40m. I did it on both of
> my 40m modules and it made a great difference. You may find Davids file
> somewhere in this yahoo group.
>
> 72s
>
>
>
> Am Freitag, den 01.12.2006, 22:14 +0000 schrieb chris reeves:
> > how will this afect the puritty of the output? Is this a know problem
> > or did I screw up? Would adding 1 turn to L1 do the same thing?
> >
> > --- In AT_Sprint@yahoogroups.com, Lutz Bergner <l.bergner@> wrote:
>

552. ATS Base Station Accessory

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-03 20:33:38 UTC
From: Steven Weber
Topic: 544 Message: 552

A picture of the BSA is now up on my web site.
<http://kd1jv.qrpradio.com/QBSA.HTM>

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

553. Re: [AT_Sprint] ATS Base Station Accessory

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-03 21:05:31 UTC
From: Jim Larsen - AL7FS
Topic: 544 Message: 553

http://kd1jv.qrpradio.com/QBSA/QBSA.HTM works better.

BSA looks great.

Jim
Jim Larsen
Anchorage, Alaska
http://www.AL7FS.us/

Steven Weber wrote:
> A picture of the BSA is now up on my web site.
> <http://kd1jv.qrpradio.com/QBSA.HTM>
>
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://www.qsl.net/kd1jv/
> http://kd1jv.qrpradio.com
>
>
>
> Yahoo! Groups Links
>
>
>
>

554. what connections needed to QBSA?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-04 14:32:22 UTC
From: steve_n0tu
Topic: 554 Message: 554

Steve, What connections do I need to make to the BSA from my ATS?
Since I'm not wanting to combine the two but use the BSA as a docking
stn? I'm curious what additional connectors I need to put on the ATS
tin? TKS Steve/n0tu

555. Re: [AT_Sprint] what connections needed to QBSA?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-04 19:35:42 UTC
From: Steven Weber
Topic: 554 Message: 555

>Steve, What connections do I need to make to the BSA from my ATS?
>Since I'm not wanting to combine the two but use the BSA as a docking
>stn? I'm curious what additional connectors I need to put on the ATS
>tin? TKS Steve/n0tu
>
You need to add a jack to connect the DDS output to the frequency counter.
To use all the functions, you need to also connect the antenna, power and
headphone output to the BSA.

I could see making a stand out of wood or foam construction board which
would hold the BSA up at a slight angle behind the ATS rig, and also hold
the ATS in place.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

556. Re: what connections needed to QBSA?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-05 13:37:52 UTC
From: steve_n0tu
Topic: 554 Message: 556

> You need to add a jack to connect the DDS output to the frequency
counter.
OK!

> I could see making a stand out of wood or foam construction board
which
> would hold the BSA up at a slight angle behind the ATS rig, and also
hold
> the ATS in place.
> Steve, KD1JV
Cool idea I like it. A docking station when not in the field.
TKS! Steve/nOtu

557. Fairchild BS-170 MOSFET

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-06 16:43:43 UTC
From: kb2tqx
Topic: 557 Message: 557

This is one for the RF geniuses out there. Does this MOSFET characterize the same as a Fairchild 2N7000? The gate capacitances and on resistance look close.

It has an 500mA Src-Drn max continuous compared to 200mA for the 2N7000, so I was wondering if it would make a more rugged working replacement for the output stage of the AT Sprint IIIA. It has the same package type - TO-92. You can see the datasheets via Mouser's website:

http://www.mouser.com/search/Refine.aspx?Ne=1447464+254016&Ntt=*Fairchild*+*2N7000*&Ntx=mode%2bmatchall&Mkw=Fairchild+2N7000&N=1323038&Ntk=Mouser_Wildcards

It's just that after reading the ATS-3A manual three times through the part talking about the possibility of device damage on highly reactive antenna loads with high SWR sticks in my mind.

Dave
KB2TQX

558. Re: [AT_Sprint] Fairchild BS-170 MOSFET

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-06 16:55:22 UTC
From: Joe Rocci
Topic: 557 Message: 558

Dave,

It's usually voltage that kills these things instantly, and it looks like both devices (2N7000 and BS-170) are spec'd at 60V.

Joe
W3JDR

----- Original Message -----
From: kb2tqx
To: AT_Sprint@yahoogroups.com
Sent: Wednesday, December 06, 2006 11:43 AM
Subject: [AT_Sprint] Fairchild BS-170 MOSFET

This is one for the RF geniuses out there. Does this MOSFET characterize the same as a Fairchild 2N7000? The gate capacitances and on resistance look close.

It has an 500mA Src-Drn max continuous compared to 200mA for the 2N7000, so I was wondering if it would make a more rugged working replacement for the output stage of the AT Sprint IIIA. It has the same package type - TO-92. You can see the datasheets via Mouser's website:

http://www.mouser.com/search/Refine.aspx?Ne=1447464+254016&Ntt=*Fairchild*+*2N7000*&Ntx=mode%2bmatchall&Mkw=Fairchild+2N7000&N=1323038&Ntk=Mouser_Wildcards

It's just that after reading the ATS-3A manual three times through the part talking about the possibility of device damage on highly reactive antenna loads with high SWR sticks in my mind.

Dave
KB2TQX

559. Re: [AT_Sprint] Fairchild BS-170 MOSFET

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-06 17:28:45 UTC
From: Bill Noyce
Topic: 557 Message: 559
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

560. Anyone thought about the AT_Sprint would be the perfect rig for a blind ham?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-06 20:47:45 UTC
From: karllued
Topic: 560 Message: 560

Just a thought. Anyone know a blind ham in need of a rig that can be completely controled without a display, is highly portable, and reasonably priced? Anyone know of another rig that fits that bill?

561. Re: Anyone thought about the AT_Sprint would be the perfect rig for a blind ham?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-06 21:17:35 UTC
From: David Lear
Topic: 560 Message: 561

--- In AT_Sprint@yahoogroups.com, "karllued" <karllued@...> wrote:
Yes the Elecraft KX1 fits that requirement but it depends on what you
class as "reasonably priced".

73,Dave NE5DL

>
> Just a thought. Anyone know a blind ham in need of a rig that can be
> completely controled without a display, is highly portable, and
> reasonably priced? Anyone know of another rig that fits that bill?
>

562. Re: [AT_Sprint] Fairchild BS-170 MOSFET

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-07 02:15:26 UTC
From: w9ya@arrl.net
Topic: 557 Message: 562

Hey Dave and the gang;

I seemed to remember this being a suggested replacement on someone's ats-1
website a few years ago or so when the original ats was all the rage.

Vy 72;

Bob
w9ya

> This is one for the RF geniuses out there. Does this MOSFET
> characterize the same as a Fairchild 2N7000? The gate capacitances and
> on resistance look close.
>
> It has an 500mA Src-Drn max continuous compared to 200mA for the
> 2N7000, so I was wondering if it would make a more rugged working
> replacement for the output stage of the AT Sprint IIIA. It has the same
> package type - TO-92. You can see the datasheets via Mouser's website:
>
> http://www.mouser.com/search/Refine.aspx?Ne=1447464+254016&Ntt=*Fairchild*+*2N7000*&Ntx=
mode%2bmatchall&Mkw=Fairchild+2N7000&N=1323038&Ntk=Mouser_Wildcards
>
>
> It's just that after reading the ATS-3A manual three times through the
> part talking about the possibility of device damage on highly reactive
> antenna loads with high SWR sticks in my mind.
>
> Dave
> KB2TQX

563. Interesting experiment

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-07 03:31:39 UTC
From: Steven Weber
Topic: 554 Message: 563

Recently, I found a 80 MHz 3.3V clock oscillator I had forgoten I had. Must have ordered it for something and never got around to that project. So, today I tried an experiment. I hooked it up to one of my few spare AD9834 chips from the most recent lot and fired it up. Amazingly, it has output! Kinda thought it would, as AD respce'd the part to work at 75 MHz and didn't change the part number. And if it could be pushed that high, why not a little higher? Anyway, apparently 75 MHz isn't a stock clock oscillator freq where 80 is.

Now to change the reference freq numbers in the MPU, design a new filter and see if it will work up to 10 M. With an 80 MHz clock, it should be just do-able.

But this rises the question of what to do with this new insight. An ATS-3B which covers 20-10M?
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

564. Re: Interesting experiment

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-07 04:17:07 UTC
From: gearjam54
Topic: 554 Message: 564

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
>
> Recently, I found a 80 MHz 3.3V clock oscillator I had forgoten I had.
Must
> have ordered it for something and never got around to that project.
So,
> today I tried an experiment. I hooked it up to one of my few spare
AD9834
> chips from the most recent lot and fired it up. Amazingly, it has
output!
> Kinda thought it would, as AD respce'd the part to work at 75 MHz and
> didn't change the part number. And if it could be pushed that high,
why not
> a little higher? Anyway, apparently 75 MHz isn't a stock clock
oscillator
> freq where 80 is.
>
> Now to change the reference freq numbers in the MPU, design a new
filter
> and see if it will work up to 10 M. With an 80 MHz clock, it should be
just
> do-able.
>
> But this rises the question of what to do with this new insight. An
ATS-3B
> which covers 20-10M?
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://www.qsl.net/kd1jv/
> http://kd1jv.qrpradio.com <http://kd1jv.qrpradio.com>

That would be nice - Larry NU4B
>

565. Re: [AT_Sprint] Interesting experiment

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-07 04:46:31 UTC
From: John A. Evans - N0HJ
Topic: 554 Message: 565

Oooh, sounds cool - 17/15/12/10m - now I am wondering if there is a way to stack and switch an ATS-3 so one could lie underneath the other and share the module connections. Dang, I may have to buy an ATS-3A now for just this purpose. Or perhaps Steve could make an ATS-3B kit with options for 80/40/30/20m or 17/15/12/10m and then we can stack them. Or a single board with dual oscillators, though that would require more software space. My brain is getting wet from all this stormin'

72 - john - n0hj

Steven Weber wrote:
>
> .
>
> But this rises the question of what to do with this new insight. An ATS-3B
> which covers 20-10M?
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://www.qsl.net/kd1jv/ <http://www.qsl.net/kd1jv/>
> http://kd1jv.qrpradio.com <http://kd1jv.qrpradio.com>
>
>

566. Re: [AT_Sprint] Interesting experiment

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-07 05:11:43 UTC
From: Roland Whitsitt
Topic: 554 Message: 566

Wow! That would be my dream come true! I'd love to have something to work those bands with. I'd say go for it Steve!!
Roland in Ca
de n5vwn
----- Original Message -----
From: Steven Weber
To: AT_Sprint@yahoogroups.com
Sent: Wednesday, December 06, 2006 7:31 PM
Subject: [AT_Sprint] Interesting experiment

Recently, I found a 80 MHz 3.3V clock oscillator I had forgoten I had. Must have ordered it for something and never got around to that project. So, today I tried an experiment. I hooked it up to one of my few spare AD9834 chips from the most recent lot and fired it up. Amazingly, it has output! Kinda thought it would, as AD respce'd the part to work at 75 MHz and didn't change the part number. And if it could be pushed that high, why not a little higher? Anyway, apparently 75 MHz isn't a stock clock oscillator freq where 80 is.

Now to change the reference freq numbers in the MPU, design a new filter and see if it will work up to 10 M. With an 80 MHz clock, it should be just do-able.

But this rises the question of what to do with this new insight. An ATS-3B which covers 20-10M?
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

567. Re: [AT_Sprint] Interesting experiment

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-07 07:51:04 UTC
From: Lutz Bergner
Topic: 554 Message: 567

Hi Steven and group,
Am Mittwoch, den 06.12.2006, 22:31 -0500 schrieb Steven Weber:

> a little higher? Anyway, apparently 75 MHz isn't a stock clock
> oscillator
> freq where 80 is.
>
RS components has them on stock here in Germany.(10,60EUR)
Thanks Steve for doing that experiment. This sounds most encouraging. My second major concern at the moment is , how far can we push this switched mode PA with given components without stopping it to be a switched one and thus producing heat - or at least considerably loose efficiency? Just ordered some 2N7000s and 74AC02 to check it out on a piece of PCB.
But before I can do that, I have to finish my multi purpose AD9951 based measuring equipment HFM9 (DL9AN/DK3WX) to be able to "see" what I am doing.
What I 'd like to say is - I probably can't supply results before first weeks in jan 2007. And I decided to wait with modding my ATS3 till I know what I can expect. ;-)

72s

Lutz,DL2HRP

568. Re: Interesting experiment

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-07 11:59:55 UTC
From: Ann
Topic: 554 Message: 568

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
"But this rises the question of what to do with this new insight. An
ATS-3B
which covers 20-10M?"

WOW!!! VERY COOL!!!!!! Count me in for sure!!!!
72/88
Ann
AB1DR

569. Interesting experiment!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-07 13:14:00 UTC
From: kklonk
Topic: 569 Message: 569

Yes yes yes!
How about a separate DDS module for low/high bands
with the option for using it as a VFO for existing
QRP rigs Steve?
Ari OH9VL

570. BS170 Pinout

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-07 14:34:58 UTC
From: Jim Miller
Topic: 570 Message: 570

If you do chose to use the BS170 in place of the 2n7000 take note of the reversed pinout on the TO-92 package.

73

jim ab3cv

571. Re: [AT_Sprint] Interesting experiment

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-07 14:39:35 UTC
From: Michael Harnage
Topic: 554 Message: 571

ATS-4. 9 bands! After all, its gonna require more
power why not go to a little larger board, put wide
mode back in, have rf attenuation vice agc and still
have changable filter boards. Size it to fit in a
standard smaller Hammond box. Oh and make digital
display optional and don't use the rocker switches,
keep with these tactile switches or go to a remote
flat tactile array, or even an ipod like interface. I
can really see the circle ring being very useful for
all kinds of radio control, etc.

My 2 cents.

-mike/w1mt

--- Steven Weber <kd1jv@...> wrote:

>
> But this rises the question of what to do with this
> new insight. An ATS-3B
> which covers 20-10M?

_____
Need a quick answer? Get one in minutes from people who know.
Ask your question on www.Answers.yahoo.com

572. Re: [AT_Sprint] Interesting experiment

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-07 14:50:22 UTC
From: Jeffrey Embry
Topic: 554 Message: 572

Mike,

I like this idea. Kinda reminds me of the multi-pig that I missed to
boat on ordering.

72,

--
Jeff Embry, K3OQ
You are welcome to visit my blog at:
k3oq.net/wordpress

--

FM19je
ARCI #11643
FPQRP #-696
NAQCC #25
AMSAT LM-2263

No trees were harmed in the sending of this message, however a large
number of electrons were terribly inconvenienced.

On 12/7/06, Michael Harnage <w1mt@...> wrote:
> ATS-4. 9 bands! After all, its gonna require more
> power why not go to a little larger board, put wide
> mode back in, have rf attenuation vice agc and still
> have changable filter boards. Size it to fit in a
> standard smaller Hammond box. Oh and make digital
> display optional and don't use the rocker switches,
> keep with these tactile switches or go to a remote
> flat tactile array, or even an ipod like interface. I
> can really see the circle ring being very useful for
> all kinds of radio control, etc.
>
> My 2 cents.
>
> -mike/w1mt
>
> --- Steven Weber <kd1jv@...> wrote:
>
>
> >
> > But this rises the question of what to do with this
> > new insight. An ATS-3B
> > which covers 20-10M?
>

>
>
>
> ---
> Need a quick answer? Get one in minutes from people who know.
> Ask your question on www.Answers.yahoo.com
>
>
>
> Yahoo! Groups Links
>
>
>
>

573. Re: Anyone thought about the AT_Sprint would be the perfect rig for a blind ham?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-07 15:57:17 UTC
From: karllued
Topic: 560 Message: 573

Can you tell your operating frequency via audio on a KX1? Also, the
push button tuning would be nice for small frequency changes.
--- In AT_Sprint@yahoogroups.com, "David Lear" <delear@...> wrote:
>
> --- In AT_Sprint@yahoogroups.com, "karllued" <karllued@> wrote:
> Yes the Elecraft KX1 fits that requirement but it depends on what you
> class as "reasonably priced".
>
> 73,Dave NE5DL
>
> >
> > Just a thought. Anyone know a blind ham in need of a rig that can
be
> > completely controled without a display, is highly portable, and
> > reasonably priced? Anyone know of another rig that fits that bill?
> >
>

574. Re: Anyone thought about the AT_Sprint would be the perfect rig for a blind ham?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-07 16:14:26 UTC
From: David Lear
Topic: 560 Message: 574

Karl - Yes it will anounce all switch and freq selections including
LSB/USB and RIT.

--- In AT_Sprint@yahoogroups.com, "karllued" <karllued@...> wrote:
>
> Can you tell your operating frequency via audio on a KX1? Also, the
> push button tuning would be nice for small frequency changes.
> --- In AT_Sprint@yahoogroups.com, "David Lear" <delear@> wrote:
> >
> > --- In AT_Sprint@yahoogroups.com, "karllued" <karllued@> wrote:
> > Yes the Elecraft KX1 fits that requirement but it depends on what you
> > class as "reasonably priced".
> >
> > 73,Dave NE5DL
> >
> > >
> > > Just a thought. Anyone know a blind ham in need of a rig that can
> be
> > > completely controled without a display, is highly portable, and
> > > reasonably priced? Anyone know of another rig that fits that bill?
> > >
> >
>

575. Re: [AT_Sprint] Interesting experiment

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-07 15:21:10 UTC
From: Michael Harnage
Topic: 554 Message: 575

Oh, one more thing. Use a "bigger" TI mpu that has
more ports. I am sure we can think of cool stuff to do
with more ports. :)

-mike/w1mt

--- Jeffrey Embry <jeffrey.embry@...> wrote:

> Mike,
>
> I like this idea. Kinda reminds me of the multi-pig
> that I missed to
> boat on ordering.
>

_____
Do you Yahoo!?
Everyone is raving about the all-new Yahoo! Mail beta.
http://new.mail.yahoo.com

576. Re: [AT_Sprint] Interesting experiment

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-07 16:25:51 UTC
From: John A. Evans - N0HJ
Topic: 554 Message: 576

OK, I've thought about for a bit. All the ideas I am hearing are great.

BUT, primarily, I want a 17/15/12/10m backpacking rig similar to the ATS-3 or ATS-3A.

Secondarily, a nice small portable all band rig with modules would be great, too - something I can take to the field or use on my desktop.

72 - john - n0hj

577. Re: [AT_Sprint] Interesting experiment

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-07 16:46:12 UTC
From: Ron Pfeiffer
Topic: 554 Message: 577

Instead of "plugin" band modules how about a wafer switch with lots of
torroids! Isn't
that what they did in the old days(bandswitch)?

Ron

578. Re: [AT_Sprint] Interesting experiment

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-07 17:18:22 UTC
From: Thomas Kuehl
Topic: 554 Message: 578

ATS'ers,

Here's my dos centavos worth...

Move the band plug-in socket such that it protrudes throught the front panel, so that the modules can be inserted without having to open the can. I fumble around inside trying to get them in and out. I guess I have big hands.
The tactile switches are ok, but I'd like much bigger buttons on the switches.
The 8 band idea was one I was pondering last eveing while I was out on my run. We wouldn't be able to use the current modules because the pin decode would have to be 2-to the-3rd. But I like the idea of 80 through 10 meters in one little package.
Some kind of receive RF attenuator. Sometimes my ATS-3A blasts my ears off when I come across a super strong station. I like the variable pot option as oppossed to a fixed attenuator.
Add another pushbotton to increase the frequency tuning speed. Something on the order of 500Hz. I tend to scan the band from top to bottom and using 50Hz/step takes a long time
An built-in frequency display would be nice option.
Steve we're never going to leave you alone. That's it for now!

'73, Thomas - AC7A (an ATS-3A op)

Steven Weber <kd1jv@...> wrote:
Recently, I found a 80 MHz 3.3V clock oscillator I had forgoten I had. Must
have ordered it for something and never got around to that project. So,
today I tried an experiment. I hooked it up to one of my few spare AD9834
chips from the most recent lot and fired it up. Amazingly, it has output!
Kinda thought it would, as AD respce'd the part to work at 75 MHz and
didn't change the part number. And if it could be pushed that high, why not
a little higher? Anyway, apparently 75 MHz isn't a stock clock oscillator
freq where 80 is.

Now to change the reference freq numbers in the MPU, design a new filter
and see if it will work up to 10 M. With an 80 MHz clock, it should be just
do-able.

But this rises the question of what to do with this new insight. An ATS-3B
which covers 20-10M?
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

Need a quick answer? Get one in minutes from people who know. Ask your question on Yahoo! Answers.

579. Re: [AT_Sprint] Interesting experiment

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-07 17:07:16 UTC
From: Steven Weber
Topic: 554 Message: 579

>ATS-4. 9 bands! After all, its gonna require more
>power why not go to a little larger board, put wide
>mode back in, have rf attenuation vice agc and still
>have changable filter boards. Size it to fit in a

Ahh, good old feature creep. It is tempting, but I hate to abandon the Altiods tin form factor. It makes such a cute little radio, which is why many of you bought one :-)

The easiest thing for me to do is stick with the current ATS-3A board. Maybe with some minor revisions and clean up. I might have to squeeze another section onto the DDS filter. There could be a "secret" band select mode so those who have a ATS3A already could use the low band modules too.

Well, the first thing to do is to build up the rest of the board and see how well it all works.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

580. Re: Interesting experiment

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-07 20:32:37 UTC
From: Dave
Topic: 554 Message: 580

> There could be a "secret" band select mode so those who have a
> ATS3A already could use the low band modules too.

Clever use of the existing 2 band-ID lines will get you 5 additional band-module IDs. Have the processor drive one low and look for a change on the other. Use a jumper, diode or transistor (inversion) between the pins, grounding none.

Dave

581. Re: Interesting experiment [ATS-3B?]

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-07 20:52:33 UTC
From: steve_n0tu
Topic: 554 Message: 581

YES! Please keep the A-tin forum factor by all means!!! ...go for a High or Low band versions of the kit ATS3 A/low or B/high.

If conditions continue to improve (and they are and will! 17m is open almost every day now) I'd opt for throwing the ATS3b in my pack to play in the high bands with smaller antennas, more DX and the fact less power goes furthur.

Albeit in perfect world it'd nice to have K2 w/ALL options jammed into a Altoids (maybe)? But I kinda prefer the simplicity of the ATS and even it's limitations. It's got the charm of Tuna Tin II with the feature set of the K1 and weighs less than half a TT2 and fit's in my parka pocket. Best yet it can survive bouncing around in the bottom of my pack for many trail miles and still power ready for a Q! Nah, Keep it simple! Altoids size is winner! IMHO.

Steve/n0tu

582. Re: [AT_Sprint] Re: Interesting experiment [ATS-3B?]

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-07 21:27:11 UTC
From: Mark Brueggemann
Topic: 554 Message: 582

--- steve_n0tu <n0tu.qrp@...> wrote:

> YES! Please keep the A-tin forum factor by all means!!! ...

I'm with N0TU, a little bigger might not be too bad, but not too much. Another feature I like about the ATS is the lack of externally protruding controls, unlike the KX1. The seperate band modules aren't a big problem, since they fit inside the tin for storage. Gotta admit, the capability of the higher bands is compelling, but 40 and 20 still covers it well. It's a great rig for air travel, where size and weight are just as significant as the Spartan Sprint.

Mark K5LXP
Albuquerque, NM

583. Re: Fairchild BS-170 MOSFET

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-07 23:23:29 UTC
From: Archie Lamb
Topic: 557 Message: 583

Tried to reply to this when it first came out and it bounced (sent my
responce from wrong email acct) - I'm glad because it made me go back
and look at the data sheet(s).

Interresting lesson here:
The data sheet from ON Semiconductor says the TO-92 pinout is D G S
(looking at the flat side). The Vishay data sheet says the pinout is
S G D (same package, same view).

Interrrrestingly, the Vishay data sheet says at the top:
"2N7000-2N7002,VQ1000J/P, BS-170",
N Channel 60v, MOSFET.
In this case I believe the channel is symetrical so that you would not
damage the device but there is a lesson in assuming partnumbers
mean that they are the same (vishay BS-170 and ON BS-170).

I use them interchangeably.

Archie (KX5X)

--- In AT_Sprint@yahoogroups.com, "kb2tqx" <kb2tqx@...> wrote:
>
> This is one for the RF geniuses out there. Does this MOSFET
> characterize the same as a Fairchild 2N7000? The gate capacitances
> and on resistance look close.
>
> It has an 500mA Src-Drn max continuous compared to 200mA for the
> 2N7000, so I was wondering if it would make a more rugged working
> replacement for the output stage of the AT Sprint IIIA. It has the
> same package type - TO-92. You can see the datasheets via Mouser's
> website:
>
>
http://www.mouser.com/search/Refine.aspx?Ne=1447464+254016&Ntt=*Fairchild*+*2N7000*&Ntx=mo
de%2bmatchall&Mkw=Fairchild+2N7000&N=1323038&Ntk=Mouser_Wildcards
>
>
> It's just that after reading the ATS-3A manual three times through the
> part talking about the possibility of device damage on highly reactive
> antenna loads with high SWR sticks in my mind.
>
> Dave
> KB2TQX
>

584. Re: Fairchild BS-170 MOSFET

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-07 23:44:54 UTC
From: kb2tqx
Topic: 557 Message: 584

I always use my Peak Atlas DCA55 semiconductor component analyser on parts before I install - it identifies the package leads for you - JFETs, MOSFETs, NPN, PNP, diodes, LEDs, etc., etc. All part of my "check twice solder once" philosophy.

I also have the Peak Atlas LCR40 passive component analyser, and I am really glad now that I purchased the optional surface mount tweezer probes. It's going to make it much easier to be sure what component I am placing on the PCB when building my ATS-3A.

These are the links at Peak Electronics for the above-mentioned:

http://www.peakelec.co.uk/acatalog/jz_dca55.html

http://www.peakelec.co.uk/acatalog/jz_lcr40.html

When I bought mine last year (direct from the UK - I live in New York) they had a special where you got the above two instruments at a discount all packaged in a foam protected case.

Dave
KB2TQX

> The data sheet from ON Semiconductor says the TO-92 pinout is D G S
> (looking at the flat side). The Vishay data sheet says the pinout is
> S G D (same package, same view).
>
> Interrrrestingly, the Vishay data sheet says at the top:
> "2N7000-2N7002,VQ1000J/P, BS-170",
> N Channel 60v, MOSFET.
> In this case I believe the channel is symetrical so that you would not
> damage the device but there is a lesson in assuming partnumbers
> mean that they are the same (vishay BS-170 and ON BS-170).
>
> I use them interchangeably.
>
> Archie (KX5X)
>
>
> --- In AT_Sprint@yahoogroups.com, "kb2tqx" <kb2tqx@> wrote:
> >
> > This is one for the RF geniuses out there. Does this MOSFET
> > characterize the same as a Fairchild 2N7000? The gate capacitances
> > and on resistance look close.
> >
> > It has an 500mA Src-Drn max continuous compared to 200mA for the
> > 2N7000, so I was wondering if it would make a more rugged working

> > replacement for the output stage of the AT Sprint IIIA. It has the
> > same package type - TO-92. You can see the datasheets via Mouser's
> > website:
> >
> >
>
http://www.mouser.com/search/Refine.aspx?Ne=1447464+254016&Ntt=*Fairchild*+*2N7000*&Ntx=mo
de%2bmatchall&Mkw=Fairchild+2N7000&N=1323038&Ntk=Mouser_Wildcards
> >
> >
> > It's just that after reading the ATS-3A manual three times through the
> > part talking about the possibility of device damage on highly reactive
> > antenna loads with high SWR sticks in my mind.
> >
> > Dave
> > KB2TQX
> >
>

586. Wide band mode for ATs-3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-08 03:48:52 UTC
From: David
Topic: 586 Message: 586

I have heard tell that earlier versions of the ATS supported a wide band mode with SSB/AM reception. What would be involved in a mod for the ATS-3A to enable support for this?

I would imagine it would require some kind of addition of a CMOS switch or something similar, along with some additional LCR parts to modify the passband on the crystal filter. The CMOS switch would then switch in the LCR to activate the bandwidth change, under the control of the MPU. This would need some changes to the firmware - an added menu item of some sort to toggle the mode.

Has anyone done such a mod?

Dave
KB2TQX

587. Re: Interesting experiment [ATS-3B?]

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-08 06:34:03 UTC
From: Mike Schettler
Topic: 554 Message: 587

I too don't want to see the ATS rigs grow in size.

Since the ATS3 rigs are re-programmable, how about having the software determine what bands it uses at a given time? When propagation on the high bands is poor, just program it for 80-20m. In a few years, a version set up for 17-10m might be more useful. If Steve were able to provide extra band modules, for a price of course, we could have the option of setting
up the radio however we want.

Mike Schettler WA6MER

588. ATS-4??

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-08 07:16:04 UTC
From: Tim Keene
Topic: 588 Message: 588

Sounds like a great idea to me. I would love to have the upper bands. I would also like to see the wide band mode. I use my ATS-3 almost every night on 80 meters with the gang I hang out with up on the phone band. It would be nice to take on vacation also just to listen in on a few phone QSO's. That's my 2 cents also.
K5DEZ - Tim

589. Longevity of plug-in band modules?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-08 12:03:39 UTC
From: John Harper
Topic: 589 Message: 589

One of the many things I like about the ATS-3 is its huge capability:size ratio. But every time I change band modules, I wonder how many more times I'll be able to do that before the mechanical stress takes its toll on a solder joint or the electrical integrity between the pins & socket.

Hopefully these concerns are unfounded but any time a moving part is involved, friction eventually creates a casulty somewhere. Althought he small size would be compromised, a neat accessory (or new design) could allow all band modules (4 or 8!) to all be plugged in simultaneously with bandswitching done with a press of one of the switches. It would still be the smallest multiband rig around and, if it included 10-20 meters, it would be a one-of-a-kind.

Just my thoughts on a very cold morning,

John Harper AE5X
http://www.ae5x.com

590. Re: [AT_Sprint] Wide band mode for ATs-3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-08 12:06:33 UTC
From: Michael Harnage
Topic: 586 Message: 590

Dave,

If you can check the schematics for the 3 version you
will see what hardware is necessary. Basically a
switch that bypasses the crystall filter. However,
since the 3A uses a different way to mute the rx
during transmits I am not sure without looking at the
schematics side by side whether the firmware will
handle both in the 3A. I will check later today and
get back unless someelse does first.

-mike/w1mt

--- David <kb2tqx@...> wrote:

> Has anyone done such a mod?
>

_____
Do you Yahoo!?
Everyone is raving about the all-new Yahoo! Mail beta.
http://new.mail.yahoo.com

591. Re: [AT_Sprint] Longevity of plug-in band modules?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-08 12:20:50 UTC
From: Lutz Bergner
Topic: 589 Message: 591

Hi John,

I use this little rig exactly for one year - nearly every day as my main rig. There is no sign of weakness. The only repair was the "frequency down" button wich is a blue one now. Changing it was not a great issue. Neither would be the socket for the BMs - all inexpencive standard components. I am optimistic about that.

72s

Lutz
DL2HRP

Am Freitag, den 08.12.2006, 12:03 +0000 schrieb John Harper:
> One of the many things I like about the ATS-3 is its huge
> capability:size ratio. But every time I change band modules, I wonder
> how many more times I'll be able to do that before the mechanical
> stress takes its toll on a solder joint or the electrical integrity
> between the pins & socket.
>

592. Error in QBSA instructions

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-08 13:34:47 UTC
From: Bruce Beford
Topic: 592 Message: 592

I have found an error in the assembly instructions for the QRP Base Station Accessory (QBSA).

The QBSA includes a variable voltage power supply section. The output voltage is controlled by a front panel pot. The instructions state that when connecting the ribbon cable from the display board to the main board for this pot, to put a twist in the cable between the two boards. This is supposed to make the pot adjust the voltage in the proper direction. i.e.- full CCW is lowest voltage, full CW is highest voltage. This will not work. Regardless of how you wire this cable, the pot will always work 'backwards' from 'normal. So CCW is highest output, CW is lowest output. This is because this pot is used as a rheostat, or simple variable resistor, not a potentiometer (resistor with a variable tap).

To get this pot to 'tune' correctly, connect the two conductor cable as follows: install one lead into the hole that connects to the wiper of the pot. Connect the second wire directly to the lead of the pot that is NOT connected to the original hole for this wire. In other words, use the opposite end of the pot from what the PC board is wired for. Viewed from the back of the display board, this is the potentiometer lead that is closest to the display. Connected this way, fully counterclockwise will be about 6 volts out, and fully clockwise will be about 11 volts out.

72,
Bruce N1RX

593. Re: [AT_Sprint] Wide band mode for ATS-3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-08 16:34:59 UTC
From: Steven Weber
Topic: 593 Message: 593

>I have heard tell that earlier versions of the ATS supported a wide
>band (SSB/AM reception). What would be involved in a mod for the
>ATS-3A to enable support for this? I would imagine it would require
>some kind of addition of a CMOS switch or something similar to modify
>the passband on the crystal filterr, and then activation of the switch
>via a change to the firmware - an added menu item.
>

The crystal filter has to be disconnected completely because it receives on
the wrong sideband for SSB on all bands but 40. In the ATS-3, an IF
transformer is used to give it some sembalance of selectivity when in Wide
band or DSB reception mode. I had to take the IF transformer out on the 3A
to make room for better Rx input filters. Trying to make a 3A work like a 3
would not be easy and I would not recommend trying.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

594. Re: [AT_Sprint] Re: Interesting experiment [ATS-3B?]

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-08 17:09:45 UTC
From: Steven Weber
Topic: 554 Message: 594

>Since the ATS3 rigs are re-programmable, how about having the software determine what
>bands it uses at a given time? When propagation on the high bands is poor, just program it
>for 80-20m. In a few years, a version set up for 17-10m might be more useful.

If it were only that simple!
Besides additional band modules and a new firmware program to support these bands, the DDS clock has to be changed to 80 MHz (getting those clock oscillators off the board once thier soldered in place isn't easy!) The 74HC02 PA driver has to be changed to a 74AC02 type, all the components in the DDS filter have to be changed and that's just what I know about at the moment.

I have a board built up with these changes on it now. Maybe by tomrrow I'll start on making filter modules and see how it works.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

595. Re: Wide band mode for ATS-3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-08 17:16:31 UTC
From: Bruce Beford
Topic: 593 Message: 595

I KNEW there was a reason I had to have both models.....
-Bruce N1RX

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:

> In the ATS-3, an IF transformer is used to give it some
> sembalance of selectivity when in Wide band or DSB reception mode.
> I had to take the IF transformer out on the 3A to make room for
> better Rx input filters. Trying to make a 3A work like a 3
> would not be easy and I would not recommend trying.

596. Re: Interesting experiment

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-08 18:06:18 UTC
From: Doug Phillips
Topic: 554 Message: 596

Steve,

Sign me up for the 3B too! I would like it to work like the -3 with the option to bypass the IF filter to RX SSB and cross mode if you can fit that in.

73

Doug W7RDP

> But this rises the question of what to do with this new insight. An ATS-3B
> which covers 20-10M?
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://www.qsl.net/kd1jv/
> http://kd1jv.qrpradio.com
>

597. Re: [AT_Sprint] Re: Interesting experiment

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-08 18:14:57 UTC
From: Petr Ouředník
Topic: 554 Message: 597

Dave,

that is what I am dreaming about - good deal as You have customers and orders coming
although You did not finished the project and You have not product launched, hihi. great.

73 and GL,

Petr OK1RP

> ------------ Původní zpráva ------------
> Od: Doug Phillips <w7rdp@...>
> Předmět: [AT_Sprint] Re: Interesting experiment
> Datum: 08.12.2006 19:12:13
> --
> Steve,
>
> Sign me up for the 3B too! I would like it to work like the -3 with
> the option to bypass the IF filter to RX SSB and cross mode if you can
> fit that in.
>
> 73
>
> Doug W7RDP
>
> >
> > But this rises the question of what to do with this new insight. An
> ATS-3B
> > which covers 20-10M?
> > 72,
> > Steve, KD1JV
> > "Melt Solder"
> > White Mountains of New Hampshire
> > http://www.qsl.net/kd1jv/
> > http://kd1jv.qrpradio.com
> >
>
>
>
>
>

Petr Ouředník
00420608230010 (private)
indians@seznam.cz
http://ok1rp.blog.cz (Hamradio)
http://topband.blog.cz (160m)

www.qsl.net/ok1rp

598. Re: [AT_Sprint] Re: Interesting experiment [ATS-3B?]

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-08 18:18:15 UTC
From: w9ya@arrl.net
Topic: 554 Message: 598

Hey Mike and the gang;

I am also in the "keep it the same size" group.

I like your idea, but would suggest using a main board mounted header-based switch for the (high ordered) 3rd bit. i.e. a simple header that allowed for the extra bit in order to get more band module selections without having to reprogram the unit.

Vy 72;

Bob
w9ya

> I too don't want to see the ATS rigs grow in size.
>
> Since the ATS3 rigs are re-programmable, how about having the software
> determine what bands it uses at a given time? When propagation on the
> high bands is poor, just program it for 80-20m. In a few years, a
> version set up for 17-10m might be more useful. If Steve were able to
> provide extra band modules, for a price of course, we could have the
> option of setting up the radio however we want.
>
> Mike Schettler WA6MER

599. Base Station Kit

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-09 00:06:45 UTC
From: Karl Larsen
Topic: 599 Message: 599

I went to the post box and I found a kit from Steven. It has a CD-Rom in it and I will print that out soon. I will see how hard it is to build. And then figure out what to put it into. It looks like we will have to provide 12 volts DC.

Karl K5DI

600. Results of High Band ATS-3A experiments

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-09 19:18:41 UTC
From: Steven Weber
Topic: 554 Message: 600

First the good news:

I've got the rig working on 17/15/12 and 10 meters. Power output 2.5 watts or better on all bands at 9V input. PA effiecentcy looks to be running about 64 % on average. Tx spurs are -50 dBc on all bands but 10, where the worst are -40 dBc. Minor changes in the spacing of the turns of the LPF toroids make significant changes in power output. I ended up using the same value caps in all the filters, the only difference being slight changes in the number of turns on the coils and the turn spacing.

Now the bad news:

As expected, the operating idle current went up significantly, from 27 mA for the stock ATS-3A to 43 mA for the HB version. A more troublesome problem also became apparent, major keyclicks and raspy sidetone in the audio on the 12 and 10 meter band. Worse than normal on 17 and 15 also, but not nearly as bad as 12 and 10. I think it might take a higher current output 5V regulator to fix that problem.

Back to tinkering...

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

601. QBSA Packaging Ideas

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-10 16:49:33 UTC
From: pdouglas12
Topic: 601 Message: 601

My QBSA arrived today, and I've printed out the excellent instructions from Steve. It looks straightforward. As suggested in the instructions, I am thinking that a somewhat larger package could include a speaker, headset jack, and UHF or BNC connectors for RF input/ output. But, I am wondering if any fast builders have already got their QSBA wired up and connected. If so, how about a few pictures? It would probably help us all to see how you did it. And what did you use for cables/connectors for fast mating between the ATS-3(A) and the QBSA. How did folks handle holding/tilting the ATS, so its controls are accessible?

Also, Steve, could you give a figure or photo showing the exact point to pick up the DDS output on the circuit board. I presume I can do it from the schematic, but I wouldn't mind some reassurance; plus, there surely are others who would benefit from a picture showing the take-off point to which the recommended 4.7pf cap should be tacked. Is the takeoff point physically the same in the ATS3 and ATS3A?

72,

Preston Douglas WJ2V

602. Re: QBSA Packaging Ideas

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-10 19:03:00 UTC
From: Bruce Beford
Topic: 601 Message: 602

Preston (and all),

I have my QBSA working, but the packaging is not finished yet. I am building it into a small metal project box with ventilated lid, like they (used to) sell at radio Shack. I have the front panel cutouts all done, and I'm laying out the rear panel connections. I am going to use BNC connectors for the TX in and ANT out connections. For the other connections to the ATS, (DDS out, phones out, power in) I am going to use a female 8-pin mini-din connector I have. This way, I don't have to drill so many holes in the case. A male 8-pin connector will have RG-174 coax for the DDS signal, another shielded cable for the audio out of the rig, and a two conductor cable for the power to the rig. So this one cable will actually have 3 seperate connectors off of it. I'll post pics of this as it comes together.

For the outptut of the DDS signal from the ATS3, I have made my connection to pin 20 of the AD9834. I actually connected to C37, which is connected to this pin. This output from the DDS chip is terminated, but unused in the ATS circuit. It has the same signal as the pin that feeds the low-pass filter, however. I used this pin to avoid disturbing the output pin actually used by the ATS3.

For a picture of how I made this connection, take a look in the N1RX ATS3/3a photo folder. Look at the pic titled "DDS Out for QBSA". There is a detailed description of the connection attached to the photo.

GL, Bruce N1RX

603. Re: [AT_Sprint] QBSA Packaging Ideas

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-10 22:36:44 UTC
From: Steven Weber
Topic: 601 Message: 603

>Also, Steve, could you give a figure or photo showing the exact point
>to pick up the DDS output on the circuit board. I presume I can do it

I couldn't get a picture which was very clear and the best I could do is
the one in the manual. The cap is tacked to the side of the inductor in the
DDS filter (L1 in the ATS-3A), the end closest to the edge of the board.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

604. QRP Base Station Accessory built and working!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-11 01:53:50 UTC
From: Bruce Beford
Topic: 604 Message: 604

I have just finished packaging my QBSA. It is mounted in a small metal project box. It measures 3 1/4 inches wide, 2 inches tall, and 3 1/2 inches deep. I have constructed a 2 foot long cable assembly to connect my ATS3. The QBSA will sit on a low shelf on my desk, with the cable tucked away until needed.

I have posted pictures in the N1RX photo folder. I have not done any panel labelling yet. That will come later.

The unit is working very well. The only issue I have is a moderate thump from the speaker on key-up when running over about 2 watts. I suspect perhaps I'll need to add a beefy filter cap for the variable regulator, or perhaps just a heavier DC cable to the rig. For now, I am satisfied, and it's working well.

Thanks for the nice add-on, Steve!

72,
Bruce N1RX

605. Re: QBSA Packaging Ideas

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-11 03:20:45 UTC
From: pdouglas12
Topic: 601 Message: 605

--- In AT_Sprint@yahoogroups.com, "Bruce Beford" <bruce.beford@...> wrote:
SNIP-------------
> For a picture of how I made this connection, take a look in the N1RX
> ATS3/3a photo folder. Look at the pic titled "DDS Out for QBSA".
> There is a detailed description of the connection attached to the
> photo.
>
> GL, Bruce N1RX

Steve, Thanks for your note, and Bruce, that's brilliant! And congrats on the neat job too. That's the kind of planning that makes a project like this even better. You've figured a way to make hookup and separation fast and convenient, which makes it like a docking accessory. The pictures are really very helpful too.

If others have done interesting things with their QSBAs, please let's see them in the pictures section. They are really helpful and inspiring.

72,

Preston Douglas WJ2V

606. Re: [AT_Sprint] QRP Base Station Accessory built and working!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-11 14:46:26 UTC
From: Kenneth Moorman
Topic: 604 Message: 606

Bruce,

Where did you tap the counter input into the ATS-3 to get the frequency readout? I had tried to do this many months ago on my ATS-3 using an FCC-1 with a small cap, but everything I tried just killed all reception. Same technique works great on my NC2030, however.

72,

Ken, NU4I

----- Original Message -----
From: "Bruce Beford" <bruce.beford@...>
To: <AT_Sprint@yahoogroups.com>
Sent: Sunday, December 10, 2006 8:53 PM
Subject: [AT_Sprint] QRP Base Station Accessory built and working!

>I have just finished packaging my QBSA. It is mounted in a small metal
> project box. It measures 3 1/4 inches wide, 2 inches tall, and 3 1/2
> inches deep. I have constructed a 2 foot long cable assembly to connect
> my ATS3.

607. Filter Module Storage in Box Lid

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-11 19:33:25 UTC
From: radio_kx0r
Topic: 607 Message: 607

All four ATS-3A filter modules will fit inside the Altoids box without interference with the main board! Take a look at the photos I posted here, and the idea is easy to see. Three boards are held in the lid of the box by plastic 4-40 x 5/16" screws and small threaded standoffs. There's enough room, provided the placement is accurate.

This idea is mainly for backpacking use, to avoid losing or damaging the filter modules. This idea isn't right for everyone, since you have to drill holes in your filter boards and box lid, and there's some risk. You have to measure and fit the boards carefully, as there's only about 1 or 2mm to play around with in each direction.

At least one, and preferably two, of the filter boards must have two corners rounded as shown in the pictures. That's the only way to mount one of them far enough toward the end of the box lid, so the other two boards will fit. The 20M and 80M boards are the ones to be rounded - don't round the other two. In addition all four boards must be shortened by 2 or 3mm at their bottom ends. This is easy to do with large dikes. Be sure you don't cut or file too deeply and remove too much of the ground traces on the boards.

The reason to shorten the boards is that there is a clearance problem between the bottom end of all three boards and the back lip of the box bottom as the box lid swings down in an arc. This isn't obvious at first!

Two clearance holes must be drilled in each board. I used a #33 drill for my 4-40 screws, and there's just enough room on the boards - unfortunately the band labels are right where the holes must go. You might choose smaller hardware if you can figure out how to screw on the standoffs or whatever you use for "nuts" to hold the boards in place in the lid. I use small threaded standoffs and that fit a Heath nutstarter - fingers will work, but the nutstarter is better. Don't use a nutdriver because you might damage parts on the boards.

I ended up gluing my various toroids to the filter boards with a bit of 5-minute epoxy. This helps keep them where they belong and may avoid damage if they catch on something during handling.

Hopefully some of you will have better ideas, or take this one to the next level. The threaded standoffs are a bit tedious, and there might be something like little rubber plugs that would just push on and stay well enough to hold the boards.

I thought of using Velcro to hold the boards inside the lid, but I decided it would be too thick for the third board, plus I didn't want to glue Velcro to the back of my filters.

Thin sheet magnetic material - like for refrigerator magnets - might work, since it will stick to the Altoids box lid. The stuff I have here isn't strong enough, however, and it would have to be glued to the back of the boards.

I though of using more SIP sockets to hold the boards by their pins, since that would allow easy swapping, but I couldn't work out the orientation. Others have used foam to hold the pins for storage - this idea is on some of the photos posted here - but it won't fit.

I tested the ATS-3A with all modules stored inside the box, and I'm still getting more than 5W on all bands, with 12.0V in. Opening and closing the lid has no effect on the power output. If you try this mod, be sure to retune the trimmer caps on your modules when you're finished.

72/73
KX0R

608. Re: QRP Base Station Accessory built and working!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-11 20:04:04 UTC
From: Bruce Beford
Topic: 604 Message: 608

For the outptut of the DDS signal from the ATS3, I have made my connection to pin 20 of the AD9834. I actually connected to C37, which is connected to this pin. This output from the DDS chip is terminated, but unused in the ATS circuit. It has the same signal as the pin that feeds the low-pass filter, however. I used this pin to avoid disturbing the output pin actually used by the ATS3.
** Note: This is NOT where Steve suggests getting this signal, but it works for me just fine. The instructions for the QBSA suggest connecting the coupling cap to the output side of the second inductor of the lowpass filter on the DDS output. either point will work. **

For a picture of how I made this connection, take a look in the N1RX ATS3/3a photo folder. Look at the pic titled "DDS Out for QBSA". There is a detailed description of the connection attached to the photo.

GL, Bruce N1RX

--- In AT_Sprint@yahoogroups.com, "Kenneth Moorman" <nu4i@...> wrote:
>
> Bruce,
>
> Where did you tap the counter input into the ATS-3 to get the frequency
> readout? I had tried to do this many months ago on my ATS-3 using an FCC-1
> with a small cap, but everything I tried just killed all reception. Same
> technique works great on my NC2030, however.
>
> 72,
>
> Ken, NU4I

609. Update: QRP Base Station Accessory built and working!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-11 21:20:39 UTC
From: Bruce Beford
Topic: 604 Message: 609

Last night I finished my Base Station Accessory for my ATS3 and tried it out. I reported hearing a thump on key-up. I am happy to report this has been resolved. I was using a straight key last night for my initial contacts. I had a 'less tyan optimal' cable connecting it to the ATS3. This morning I disconnected the straight key, and tried a set of paddles. No thump! I can confidently say my troubles were not due to any problem with the QSBA. She seems to be working fine..

72,
Bruce N1RX

610. Re: Update: QRP Base Station Accessory built and working!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-11 21:51:39 UTC
From: w1mt
Topic: 604 Message: 610

Nice job, Bruce! One of these days I am going to get some time and
build my QBSA.

The audio keying thump while using a straight key is a known issue and
is fixed by Steve in all the latest versions of firmware. This "thump"
is only in the audio feedback and not transmitted on the air. If you
are using a recent firmware version and still have hear the thump,
please let me know and we will dig back into the firmware...

mike/w1mt

--- In AT_Sprint@yahoogroups.com, "Bruce Beford" <bruce.beford@...> wrote:
I was using a straight key last night for my initial
> contacts. I had a 'less tyan optimal' cable connecting it to the ATS3.
> This morning I disconnected the straight key, and tried a set of
> paddles. No thump!

611. ATS3 80M Power?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-11 22:14:59 UTC
From: Jim Miller
Topic: 611 Message: 611

Finally got around to winding the toroids for the 80M module for my ATS3(non-a).

It was a really tight squeeze getting all 23/24 turns on the coils but I made it without overlapping anything this time. After I finished and counted the turns for the third time I made sure the turns were approximately evenly spaced on the toroid outer edges.

I brought it up on the ATS3 and tweaked the capacitor as usual then put on a dummy load and checked power.

The power out is about 4W with 12.7V in from a gell cell.

That's about a watt lower than I've seen on the other bands for that input voltage.

Is that normal for 80M?

73

jim ab3cv

612. Straight key thump/ firmware

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-12 02:26:51 UTC
From: Bruce Beford
Topic: 604 Message: 612

Hi Mike. The firmware I currently have in my ATS3 is the one you put in when we met at Atlanticon last April. So I am one version back from your most current. I thought it was supposed to take care of the straight key thump...

In any event, when I get a chance, I'll put in your lateest version, and see how it goes. I'll keep you posted.

Thanks, Bruce N1RX--- In AT_Sprint@yahoogroups.com, "w1mt" <w1mt@...> wrote:
> The audio keying thump while using a straight key is a known issue and
> is fixed by Steve in all the latest versions of firmware. This "thump"
> is only in the audio feedback and not transmitted on the air. If you
> are using a recent firmware version and still have hear the thump,
> please let me know and we will dig back into the firmware...
>
> mike/w1mt
>

613. ATS3A AND QBSA Up and Running!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-12 12:20:48 UTC
From: kr5l
Topic: 613 Message: 613

Hi ATS fans,

Well, I moved to Florida and left my ATSIII in a storage building in Oklahoma! Bummer. So I ordered the new ATS3A AND the QBSA kits. I finished them both and everything works as advertised!! The only mistake I made on the ATS3A was soldering in R2 and R4 in the wrong orientation... In the process of 'correcting' my error, I wiped out R2 --- I replaced it with a 1/4W 10k resistor.... I didn't have a spare SMD 103 resistor laying around. I didn't want to wait for a replacement part. I had to re-heat the four pins on the 50MHZ oscillator to get the DDS chip to come to life.

I tapped the DDS output on pin 20 as suggested by N1RX... works great! Thanks Bruce.

Thanks and KUDOS to Steve for yet another fine job of engineering and packaging. Now comes the fun part.... packaging. There are a lot of good suggestions on the reflector.... I have some ideas of my own that I would like to try.

Keeping the solder fumes aloft,

Jerry Henshaw
KR5L

614. Re: [AT_Sprint] Straight key thump/ firmware

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-12 14:37:21 UTC
From: Michael Harnage
Topic: 604 Message: 614

Yes I think that one had the "fix" in it. Perhaps
something else is going on...

Keep us posted...

-mike

--- Bruce Beford <bruce.beford@...> wrote:
> I thought it was supposed to take
> care of the
> straight key thump...
>

_____
Need a quick answer? Get one in minutes from people who know.
Ask your question on www.Answers.yahoo.com

615. ATS3a label (WIP)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-12 15:22:30 UTC
From: steve_n0tu
Topic: 615 Message: 615

I've made a label (work in progress) for my ATS3a which is a PDF in the file folder. It's sized smaller than the Altoids tin so it'll fit between the screws and just rest close to the push buttons. The plan is to print it then get it lamenated an cut it out leaving a 1/8" border of clear lamenate and adhere to the Altoids surface to align with the push buttons. I may punch holes in it for the buttons if I can find the right size punch ...have see what works best on this.

I'm in the brain fade phase of the human life cycle and having the cheat sheet on top of the case is a must for this old goat! I'm still editing the MENU text to be as brief as possible, less redundant and still make sense. Any thoughts or suggestions would be helpfull? (PDF label is the group FILES under N0TU's ATS3a...)

On module storage I'm only seeing it possible to squeeze one (maybe 2?) into to Altoids lid? But this is my next task. Mean while I'm having more fun just using it!

Tks Steve/n0tu
http://www.angelfire.com/planet/goatman/ATS3a.html

616. QBSA Manual

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-12 16:34:19 UTC
From: golson80301
Topic: 616 Message: 616

Hi to the group,

I'm a proud owner of an ATS2. I've been using it during my business travels for the last two few years. I know that the ATS3/A is smaller, but I love the fact that the ATS2 came with a pre-punched, labeled case.... a very good thing!

I've been thinking of ordering the QBSA, but I would like to review the manual first. The manual is not currently available on Steve's website (or perhaps I just can't find it), so I was wondering if someone who has received the kit could post the manual to the file section of the group (with Steve's permission of course).

Thanks in advance for any help.

73 from Colorado
Gregg, W0MPR

617. Re: [AT_Sprint] ATS3a label (WIP)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-12 17:57:31 UTC
From: w9ya@arrl.net
Topic: 615 Message: 617

Yeah I did something very similar. Mark B. - K5LXP goaded me into doing this.

I like it too. Comes in very handy.

Vy 72;

Bob
w9ya

> I've made a label (work in progress) for my ATS3a which is a PDF in the
> file folder. It's sized smaller than the Altoids tin so it'll fit
> between the screws and just rest close to the push buttons. The plan is
> to print it then get it lamenated an cut it out leaving a 1/8" border
> of clear lamenate and adhere to the Altoids surface to align with the
> push buttons. I may punch holes in it for the buttons if I can find the
> right size punch ...have see what works best on this.
>
> I'm in the brain fade phase of the human life cycle and having the
> cheat sheet on top of the case is a must for this old goat! I'm still
> editing the MENU text to be as brief as possible, less redundant and
> still make sense. Any thoughts or suggestions would be helpfull?
> (PDF label is the group FILES under N0TU's ATS3a...)
>
> On module storage I'm only seeing it possible to squeeze one (maybe 2?)
> into to Altoids lid? But this is my next task. Mean while I'm having
> more fun just using it!
>
> Tks Steve/n0tu
> http://www.angelfire.com/planet/goatman/ATS3a.html

618. Re: [AT_Sprint] QBSA Manual

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-13 14:32:46 UTC
From: Kurt Savegnago
Topic: 616 Message: 618

Hi,

I think one can get the BLT box from Hendricks QRP kits here:

http://www.qrpkits.com/barecase1.html

At least it looks that way. You could also get the BLT kit too.
I already have an EMTEC ZM-2 to build but a modified BLT for balanced/
unbalanced antennas or an ALT for the plain longwire might be smaller to
carry.

Kurt Savegnago

619. Re: QBSA Manual

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-13 15:02:32 UTC
From: golson80301
Topic: 616 Message: 619

--- In AT_Sprint@yahoogroups.com, "golson80301" <gregg_olson@...>
wrote:
> I was wondering if someone who has received the kit could post the
manual to the file section of the group (with Steve's permission of
course).

I want to thank the many members of the group that offered to send the
manual... I had a copy within an hour of posting! Now I'm looking
forward to reading the posts of folks that have completed the QBSA
project.

73
Gregg; W0MPR

620. Re: [AT_Sprint] Re: QRP Base Station Accessory built and working!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-13 15:01:55 UTC
From: nu4i@cox.net
Topic: 604 Message: 620

Thanks for the info, Bruce. This has worked out just fine this time around. I was able to increase the size of the coupling cap to 22pf which even with a cable capcitance of 140pf (later reduced to 64pf) I was able to get adequate signal for the FCC-1 to count reliably.

72,

Ken, NU4I

---- Bruce Beford <bruce.beford@...> wrote:
> For the outptut of the DDS signal from the ATS3, I have made my
> connection to pin 20 of the AD9834. I actually connected to C37,
> which is connected to this pin. This output from the DDS chip is
> terminated, but unused in the ATS circuit. It has the same signal as
> the pin that feeds the low-pass filter, however. I used this pin to
> avoid disturbing the output pin actually used by the ATS3.
> ** Note: This is NOT where Steve suggests getting this signal, but it
> works for me just fine. The instructions for the QBSA suggest
> connecting the coupling cap to the output side of the second inductor
> of the lowpass filter on the DDS output. either point will work. **
>
> For a picture of how I made this connection, take a look in the N1RX
> ATS3/3a photo folder. Look at the pic titled "DDS Out for QBSA".
> There is a detailed description of the connection attached to the
> photo.
>
> GL, Bruce N1RX
>
>

621. Re: [AT_Sprint] QBSA Manual

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-13 14:55:35 UTC
From: W2AGN
Topic: 616 Message: 621

Kurt Savegnago wrote:

Hi,

I think one can get the BLT box from Hendricks QRP kits here:

http://www.qrpkits.com/barecase1.html

At least it looks that way. You could also get the BLT kit too.
I already have an EMTEC ZM-2 to build but a modified BLT for balanced/
unbalanced antennas or an ALT for the plain longwire might be smaller to
carry.

Kurt Savegnago

NOTE!!! That is NOT the same case as the BLT, and is quite a bit smaller. I do not think the QBSA will fit.

_ _ _ _ _
/ \ / \ / \ / \ / \ John L. Sielke
(W)(2)(A)(G)(N) http://w2agn.net
_/ _/ _/ _/ _/ http://www.blurty.com/users/w2agn
See the underhanded actions of QRP-ARCI®. http://w2agn.net/noarci.html

622. anyone have a ATS for sale?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-13 15:29:07 UTC
From: twoube1
Topic: 622 Message: 622

Built...unbuilt..... all types considered!

Thanks!
John K5MO

623. Re: [AT_Sprint] QBSA Manual

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-13 16:35:01 UTC
From: Steven Weber
Topic: 616 Message: 623

> NOTE!!! That is NOT the same case as the BLT, and is quite a bit smaller.
I do not think the QBSA will fit.

Correct. The "bare case 1" is too small by about 3/8" in width and height.
Too bad..

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

624. Re: [AT_Sprint] QBSA Manual

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-13 18:50:49 UTC
From: Kurt Savegnago
Topic: 616 Message: 624

Darn,

Sorry, I should have looked closer. I wonder if that means
the BLT is in a smaller case.

Kurt

Steven Weber wrote:
>> NOTE!!! That is NOT the same case as the BLT, and is quite a bit smaller.
> I do not think the QBSA will fit.
>
> Correct. The "bare case 1" is too small by about 3/8" in width and height.
> Too bad..
>
>
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://www.qsl.net/kd1jv/
> http://kd1jv.qrpradio.com

625. Re: QBSA Manual

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-13 20:29:57 UTC
From: Bruce Beford
Topic: 616 Message: 625

No, The BLT case is larger, not smaller.
Maybe if enough of us beg Doug, he will offer the bare BLT cases
again?......

-Bruce N1RX

--- In AT_Sprint@yahoogroups.com, Kurt Savegnago <ksaves2@...> wrote:
>
> Darn,
>
> Sorry, I should have looked closer. I wonder if that means
> the BLT is in a smaller case.
>
> Kurt
>

626. Re: Straight key thump/ firmware- Resolved.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-13 20:35:14 UTC
From: Bruce Beford
Topic: 604 Message: 626

Mike (and ALL)-

I loaded your latest firmware (ATS3_m36) into my ATS3 and the straight key thump is gone. I must have loaded an older version into the ATS3 at some point. Unfortunately, since the MPU has no way to report it's firmware rev level, I have no way of knowing what was actually in there before. In any event, it's working well now. You can stop sweating, hi. Now just need to recal...

-Bruce N1RX

--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:
>
> Yes I think that one had the "fix" in it. Perhaps
> something else is going on...
>
> Keep us posted...
>
> -mike
>
> --- Bruce Beford <bruce.beford@...> wrote:
> > I thought it was supposed to take
> > care of the
> > straight key thump...
> >
>
>
>
>

> Need a quick answer? Get one in minutes from people who know.
> Ask your question on www.Answers.yahoo.com
>

627. Re: [AT_Sprint] Re: Straight key thump/ firmware- Resolved.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-13 20:53:53 UTC
From: Michael Harnage
Topic: 604 Message: 627

Once you enter cal mode you will hear (in cw) the
version of firmware that is loaded. This is recent
(within the last year) for both Steve's and my
versions.

-mike/w1mt

--- Bruce Beford <bruce.beford@...> wrote:

> Mike (and ALL)-
>
> Unfortunately, since the MPU
> has no way to
> report it's firmware rev level, I have no way of
> knowing what was
> actually in there before.

_____
Do you Yahoo!?
Everyone is raving about the all-new Yahoo! Mail beta.
http://new.mail.yahoo.com

628. Firmware version

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-13 21:08:20 UTC
From: Bruce Beford
Topic: 604 Message: 628

This is good to know- Thanks!
-Bruce N1RX

--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:
>
> Once you enter cal mode you will hear (in cw) the
> version of firmware that is loaded. This is recent
> (within the last year) for both Steve's and my
> versions.
>
> -mike/w1mt

629. RE: [AT_Sprint] anyone have a ATS for sale?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-13 22:14:03 UTC
From: Jim Crooke
Topic: 622 Message: 629

I have an ATS II unbuilt and available if you haven't found anything yet.

Jim KJ0C
-----Original Message-----
From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com]On
Behalf Of twoube1
Sent: Wednesday, December 13, 2006 9:29 AM
To: AT_Sprint@yahoogroups.com
Subject: [AT_Sprint] anyone have a ATS for sale?

Built...unbuilt..... all types considered!

Thanks!
John K5MO

--
No virus found in this outgoing message.
Checked by AVG Free Edition.
Version: 7.5.432 / Virus Database: 268.15.18/585 - Release Date: 12/13/2006
11:49 AM

630. ATS-3A Frequency Capabilities

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-14 06:24:04 UTC
From: radio_kx0r
Topic: 630 Message: 630

I did some tests and found that my new ATS-3A with V2 firmware can operate on various frequencies outside of the normal tuning range accessible by the Up-Down buttons. There is a way to cross some of the tuning barriers using direct frequency entry.

I've summarized my findings in a Word document posted in the Files section here. Depending on your version of firmware, your radio may perform differently. In any case, please read the document before you start playing around with your radio.

Be careful when using Direct Entry mode. Your radio may be able to receive and transmit outside of the amateur bands if you goof up a Direct Entry command. If this happens, just cycle the power off and on and re-enter your frequency.

Some of these capabilities are useful features for some of us. I'm interested in hearing from others, because you may discover some things I haven't found. Remember that your radio wasn't designed to go outside its intended ranges, so don't push your luck...be gentle.

KX0R

631. Nice in ear headphones for Sprint

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-14 17:37:39 UTC
From: karllued
Topic: 631 Message: 631

I have been looking for a nice set of in-ear type earphones for the Sprint-3A, and found some finally. They are Coby CV-E91. I got them for only $14.95 at FYE, a store in the local mall. I prefer in ear type with the soft rubber plugs, but the really nice feature is they have a small volume slide built into the cord. I find on really strong signals, the volume gets a little loud, and this little attenuator is just the ticket. Of course I have no finacial interest in any of the products or companies I mentioned. They are not high fidelity, or expensive!

632. RE: [AT_Sprint] Nice in ear headphones for Sprint

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-14 18:18:07 UTC
From: andrew.macallister@emersonprocess.com
Topic: 631 Message: 632

Is there a spec on the package for sensitivity? I am currently using some Koss earbuds with soft rubber plugs, with the highest claimed sensitivity of all that I have seen. The audio on my ATS-3A seems louder than my ATS-3. The volume slide control would have been handy during the last Spartan Sprint. My noise level was deafening.

Andy W5ACM

From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@...m] On Behalf Of karllued
Sent: Thursday, December 14, 2006 11:38 AM
To: AT_Sprint@yahoogroups.com
Subject: [AT_Sprint] Nice in ear headphones for Sprint

I have been looking for a nice set of in-ear type earphones for the Sprint-3A, and found some finally. They are Coby CV-E91. I got them for only $14.95 at FYE, a store in the local mall. I prefer in ear type with the soft rubber plugs, but the really nice feature is they have a small volume slide built into the cord. I find on really strong signals, the volume gets a little loud, and this little attenuator is just the ticket. Of course I have no finacial interest in any of the products or companies I mentioned. They are not high fidelity, or expensive!

633. Nice in ear headphones for Sprint

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-14 20:29:15 UTC
From: karllued
Topic: 631 Message: 633

I have been looking for a nice set of in-ear type earphones for the Sprint-3A, and found some finally. They are Coby CV-E91. I got them for only $14.95 at FYE, a store in the local mall. I prefer in ear type with the soft rubber plugs, but the really nice feature is they have a small volume slide built into the cord. I find on really strong signals, the volume gets a little loud, and this little attenuator is just the ticket. Of course I have no finacial interest in any of the products or companies I mentioned. They are not high fidelity, or expensive!

634. Re: Nice in ear headphones for Sprint

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-15 14:51:08 UTC
From: fixnwrtr
Topic: 631 Message: 634

On a quick search, I came up with this:
http://www.beachaudio.com/product_info.php?products_id=84058&prodid=cve91&GCID=C12585x003>
KW=cve91&utm_source=froogle&utm_medium=cpc&utm_term=cve91&utm_content=AD_ID&utm_campaign=f
roogle

You can get them cheaper and they seem to be a very good product.

72/73
Jackie
AC0CA

--- In AT_Sprint@yahoogroups.com, <andrew.macallister@...> wrote:
>
> Is there a spec on the package for sensitivity? I am currently using
> some Koss earbuds with soft rubber plugs, with the highest claimed
> sensitivity of all that I have seen. The audio on my ATS-3A seems louder
> than my ATS-3. The volume slide control would have been handy during the
> last Spartan Sprint. My noise level was deafening.
>
>
>
> Andy W5ACM
>
>
>
> _____
>
> From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com] On
> Behalf Of karllued
> Sent: Thursday, December 14, 2006 11:38 AM
> To: AT_Sprint@yahoogroups.com
> Subject: [AT_Sprint] Nice in ear headphones for Sprint
>
>
>
> I have been looking for a nice set of in-ear type earphones for the
> Sprint-3A, and found some finally. They are Coby CV-E91. I got them
> for only $14.95 at FYE, a store in the local mall. I prefer in ear
> type with the soft rubber plugs, but the really nice feature is they
> have a small volume slide built into the cord. I find on really strong
> signals, the volume gets a little loud, and this little attenuator is
> just the ticket. Of course I have no finacial interest in any of the
> products or companies I mentioned. They are not high fidelity, or
> expensive!
>

635. Re: Nice in ear headphones for Sprint

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-15 17:25:03 UTC
From: karllued
Topic: 631 Message: 635

I saw no spec on sensitivity of the headphones, but I took the radio to work to maximize the 40m module. With a signal of -126 dBu at the antenna in jack, I could detect the tone in the headphones. This was the smallest signal the generator would produce and remain calibrated. With normal atmospheric noise, this is all the sensitivity you would ever need.--- In AT_Sprint@yahoogroups.com, <andrew.macallister@...> wrote:
>
> Is there a spec on the package for sensitivity? I am currently using
> some Koss earbuds with soft rubber plugs, with the highest claimed
> sensitivity of all that I have seen. The audio on my ATS-3A seems louder
> than my ATS-3. The volume slide control would have been handy during the
> last Spartan Sprint. My noise level was deafening.
>
>
>
> Andy W5ACM
>
>
>
> _____
>
> From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com] On
> Behalf Of karllued
> Sent: Thursday, December 14, 2006 11:38 AM
> To: AT_Sprint@yahoogroups.com
> Subject: [AT_Sprint] Nice in ear headphones for Sprint
>
>
>
> I have been looking for a nice set of in-ear type earphones for the
> Sprint-3A, and found some finally. They are Coby CV-E91. I got them
> for only $14.95 at FYE, a store in the local mall. I prefer in ear
> type with the soft rubber plugs, but the really nice feature is they
> have a small volume slide built into the cord. I find on really strong
> signals, the volume gets a little loud, and this little attenuator is
> just the ticket. Of course I have no finacial interest in any of the
> products or companies I mentioned. They are not high fidelity, or

> expensive!
>

636. Re: Nice in ear headphones for Sprint

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-15 18:03:04 UTC
From: karllued
Topic: 631 Message: 636

I saw no spec on sensitivity of the headphones, but I took the radio
to work to maximize the 40m module. With a signal of -126 dBu at the
antenna in jack, I could detect the tone in the headphones. This was
the smallest signal the generator would produce and remain
calibrated. With normal atmospheric noise, this is all the
sensitivity you would ever need.--- In AT_Sprint@yahoogroups.com,
<andrew.macallister@...> wrote:
>
> Is there a spec on the package for sensitivity? I am currently using
> some Koss earbuds with soft rubber plugs, with the highest claimed
> sensitivity of all that I have seen. The audio on my ATS-3A seems
louder
> than my ATS-3. The volume slide control would have been handy
during the
> last Spartan Sprint. My noise level was deafening.
>
>
>
> Andy W5ACM
>
>
>
> _____
>
> From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com]
On
> Behalf Of karllued
> Sent: Thursday, December 14, 2006 11:38 AM
> To: AT_Sprint@yahoogroups.com
> Subject: [AT_Sprint] Nice in ear headphones for Sprint
>
>
>
> I have been looking for a nice set of in-ear type earphones for the
> Sprint-3A, and found some finally. They are Coby CV-E91. I got them
> for only $14.95 at FYE, a store in the local mall. I prefer in ear
> type with the soft rubber plugs, but the really nice feature is
they
> have a small volume slide built into the cord. I find on really
strong
> signals, the volume gets a little loud, and this little attenuator
is
> just the ticket. Of course I have no finacial interest in any of
the
> products or companies I mentioned. They are not high fidelity, or

> expensive!
>

637. Headphone volume control

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-15 18:56:52 UTC
From: Bruce Beford
Topic: 637 Message: 637

For a simple volume control add-on, consider Radio Shack Catalog #: 42-2559 - It's a simple in-line volume control for any set of headphones or ear buds. Costs about eight bucks. I like mine.

-Bruce N1RX

638. Stupid Question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-15 19:42:22 UTC
From: jimcur134
Topic: 638 Message: 638

Sorry if my question is too primitive. Most of you seem like quite sophisticated amateurs.

I'm really a newbie. I've just learned Morse code (pretty easy, but not trivial), and I'm studying for the licensing exams. I've built some electronic kits in the past, and I follow directions with very great precision. Complexity is not my enemy.

I want to build a QRP radio for several reasons. I want to learn something about circuitry. I want the learning that comes from making mistakes, finding them, and correcting them. So, I'm willing to contribute my share of sweat to the process. However, when I'm done sweating, I don't want a toy. I want a radio that works competently. It should work off a power supply at home, and it should work off a battery when I'm backpacking. It should be a real radio and not some ridiculous toy that half works or works intermittently.

I've tried to scan as many QRP rigs as I can, and as far as I can tell the Sprint IIIA is about as good as it gets. Am I right? Does it compare decently with the German radios (Tramp 8, Mosquita)?

As far as I can tell, nothing available is remotely comparable to the Sprint IIIA. This appears to be ten times as true if we just measure value per dollar.

If all this is true, is it a good time to buy and build this rig, or will there be a Super Spring IV with more bands and full voice and a DVD player available pretty soon?

Sorry if my questions bother your list.

Regards,
Jim Curry
Cut Bank, MT

639. Re: [AT_Sprint] Stupid Question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-15 20:07:39 UTC
From: Michael Harnage
Topic: 638 Message: 639

Hi Jim,

At the risk of oversimplifying the answers:

Yes, it is a good time to buy and build this rig, if
any are left.

Yes, there will always be other rigs in the future
that you will want to buy and build.

73 de w1mt
Mike

--- jimcur134 <jimcur134@...> asked:

>
> is it a good time to buy and
> build this rig, or
> will there be a Super Spring IV with more bands and
> full voice and a
> DVD player available pretty soon?
>

Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

640. Re: Stupid Question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-15 20:19:51 UTC
From: Bruce Beford
Topic: 638 Message: 640

Thanks for posting Jim, and welcome aboard!

In my (not so humble) opinion, the ATS3A gives you the most bang for the buck in the multiband transciever kit market right now. For the cost of some monband transceivers, you get a very competent 4 band rig, in a VERY compact and power-thrifty configuration.

If the thought of the SMT construction does not bother you, and you are a methodical builder as you say, you should not have any problem with the build.

If you want a super full-featured multimode all band MF/HF rig, then the Elecraft K2 is for you. That's not a backpacking rig, though. Two very different animals.

I have built all of the Elecraft transceivers, most of the products from Small Wonder Labs, a few from Oak Hills Research, most of the NorCal rigs and derivatives (ie Red Hot Radio, Wilderness Radio), as well as many other specialty kits. I have also built just about all of Steve's (KD1JV) kits.

I haven't yet done any of the DL-QRP-AG kits, though. (hmmm... gonna have to address that!) The Tramp 8 is a much larger, heavier unit. Also, the Tramp 8 will cost you over twice the cost of the ATS3A, when you order 4 band modules with it. The receiver front end will do a better job of holding up under all the shortwave broadcast interference they have as a fact of life in Europe. We don't have the level of problems with that here in the US, however.

As for what Steve may have up his sleeve next.... I wouldn't wait. It looks like the current run of ATS3A's may be the last, and there are only a handful left. If you are thinking of buying, I suggest you send an email off to Steve, and see if he has any left. Let him know your check is on it's way, and he'll hold one for you.

Steve's been experimenting the past week or so on the feasability of a higher-band version of the ATS- as in 17, 15, 12 and 10M. That's a work in progress. With Steve, there is always a work in progress....

Hope this helps...

-Bruce N1RX

--- In AT_Sprint@yahoogroups.com, "jimcur134" <jimcur134@...> wrote:
<snip>
> I want to build a QRP radio for several reasons. I want to learn
> something about circuitry. I want the learning that comes from

> making mistakes, finding them, and correcting them. So, I'm willing
> to contribute my share of sweat to the process. However, when I'm
> done sweating, I don't want a toy. I want a radio that works
> competently. It should work off a power supply at home, and it
> should work off a battery when I'm backpacking. It should be a
> real radio and not some ridiculous toy that half works or works
> intermittently.

641. Re: Stupid Question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-16 16:32:41 UTC
From: karllued
Topic: 638 Message: 641

If your main interest is morse code, which is what I discovered I liked best after spending about $2000. on a Kenwood TS-690S, brand new with EVERY option in 1993, I can honestly say the Sprint 3A is a quieter receiver than the Kenwood. The Kenwood will do voice/digital modes that the Sprint won't do, it covers more bands, including 6m FM, and it puts out 100w, and I installed the automatic antenna tuner which is nice, but if you want a CW rig, the Sprint works better, and is more portable, and CHEAPER. Another rig you might consider is the Elecraft KX-1. Several people have told me this is a nice radio, but by the time you put in some options, it can get into your wallet. The only advantages I can see to it is an optional automatic tuner built in, all the filters for every band are there simutaneously, and it has an ?optional? paddle that connects to the side of the rig. NO HF RADIO WILL WORK WELL ALL THE TIME, you will always be able to talk across town, but the band conditions affect most other communications. I look at QRP like hooking a sword fish on 10lb test. It is a lot more sporting! I live in NM, and have been able to contact the east coast regularly, (around 1900 miles), over the past couple of months with poor band conditions. It takes very little power to make a sucessful CW contact.

--- In AT_Sprint@yahoogroups.com, "jimcur134" <jimcur134@...> wrote:

> Sorry if my question is too primitive. Most of you seem like quite
> sophisticated amateurs.
>
> I'm really a newbie. I've just learned Morse code (pretty easy,
but
> not trivial), and I'm studying for the licensing exams. I've built
> some electronic kits in the past, and I follow directions with very
> great precision. Complexity is not my enemy.
>
> I want to build a QRP radio for several reasons. I want to learn
> something about circuitry. I want the learning that comes from
> making mistakes, finding them, and correcting them. So, I'm willing
> to contribute my share of sweat to the process. However, when I'm
> done sweating, I don't want a toy. I want a radio that works
> competently. It should work off a power supply at home, and it
> should work off a battery when I'm backpacking. It should be a
real
> radio and not some ridiculous toy that half works or works
> intermittently.
>
> I've tried to scan as many QRP rigs as I can, and as far as I can
> tell the Sprint IIIA is about as good as it gets. Am I right?

Does

> it compare decently with the German radios (Tramp 8, Mosquita)?
>
> As far as I can tell, nothing available is remotely comparable to
the
> Sprint IIIA. This appears to be ten times as true if we just
measure
> value per dollar.
>
> If all this is true, is it a good time to buy and build this rig,
or
> will there be a Super Spring IV with more bands and full voice and
a
> DVD player available pretty soon?
>
> Sorry if my questions bother your list.
>
> Regards,
> Jim Curry
> Cut Bank, MT
>

642. Re: Stupid Question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-17 03:25:16 UTC
From: Ann
Topic: 638 Message: 642

Jim,
Welcome aboard!!
I'll TRY to keep this short.
you wrote:
>>""nothing available is remotely comparable to the
Sprint IIIA"<<<
Yes...IMHO yes I believe that.
I have built a K2/KX1/lots of stuff from SWL...and THEN there is KD1JV....YIKES!!! Steve's stuff is in a class all by itself!! Steve is a GENIUS...he is so far ahead of any other designers out there!!! I truly believe there is NO comparison!!! The receiver on the ATS-3a is incredible!!! I have done comparisons with my FT-1000 and I'm so impressed with Steve's ATS-3a!! BTW...the other mulit-band "backpacking radio" tht I built and own, the KX1, gives me about 2 watts out with a battery but I can get 4-5 watts out with a battery pack with the the ATS with a FRACTION of the weight. The KX1 weights almost a HALF POUND more than the ATS-3a!!! I've built three of Steve's rigs so far and starting on the second one I test the band modules out by chasing DX....I know if an EU can hear me on that band module...the module is tuned pretty well :) and I feel confident to go after ANYONE that I can hear with the rig!!!
If you want to get on the KD1JV band wagon hop on quickly...I'm not sure how much longer Steve plans to kit these!!
GL!!!
72/88
Ann
K1QO (formerly AB1DR)

-- In AT_Sprint@yahoogroups.com, "jimcur134" <jimcur134@...> wrote:
>
> Sorry if my question is too primitive. Most of you seem like quite
> sophisticated amateurs.
>
> I'm really a newbie. I've just learned Morse code (pretty easy, but
> not trivial), and I'm studying for the licensing exams. I've built
> some electronic kits in the past, and I follow directions with very
> great precision. Complexity is not my enemy.
>
> I want to build a QRP radio for several reasons. I want to learn
> something about circuitry. I want the learning that comes from
> making mistakes, finding them, and correcting them. So, I'm

willing
> to contribute my share of sweat to the process. However, when I'm
> done sweating, I don't want a toy. I want a radio that works
> competently. It should work off a power supply at home, and it
> should work off a battery when I'm backpacking. It should be a
real
> radio and not some ridiculous toy that half works or works
> intermittently.
>
> I've tried to scan as many QRP rigs as I can, and as far as I can
> tell the Sprint IIIA is about as good as it gets. Am I right?
Does
> it compare decently with the German radios (Tramp 8, Mosquita)?
>
> As far as I can tell, nothing available is remotely comparable to
the
> Sprint IIIA. This appears to be ten times as true if we just
measure
> value per dollar.
>
> If all this is true, is it a good time to buy and build this rig,
or
> will there be a Super Spring IV with more bands and full voice and
a
> DVD player available pretty soon?
>
> Sorry if my questions bother your list.
>
> Regards,
> Jim Curry
> Cut Bank, MT
>

643. Re: Stupid Question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-17 14:46:26 UTC
From: steve_n0tu
Topic: 638 Message: 643

The KX1's filter is 3-pole where the ATS3 is 4-pole which is superior IMHO! On the ATS3 you don't hear the opposite sideband note bleeding through like you do on the KX1.

The KX1 is a nice setup but if your 'serious' about cutting your trail weight down ...again the ATS is wins! Of course this depends on your battery, atu and paddle (key) weights but there's ways to get these down as well.

Lots of choices, too little 'play' time.

Steve

644. New ATS-3 speaks

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-17 18:12:59 UTC
From: gearjam54
Topic: 644 Message: 644

After months of procrastanation I finally fininshed my ATS-3. It was so nice hearing that "ATS-3" after power up.
So far I've only had 2 problems"
1) a lost part which Steve replaced.
2) I switched D1 and D2. That was pretty easy to find after my 9V input dropped to .25V after D1. And to add insult to injury the instructions clearly state which diode goes where.
Anyway on to finish the calibrations and tests and hopefully another ATS-3 will be on the air.

Larry - NU4B

645. Re: [AT_Sprint] Re: Stupid Question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-17 15:00:39 UTC
From: W2AGN
Topic: 638 Message: 645

steve_n0tu wrote:

The KX1's filter is 3-pole where the ATS3 is 4-pole which is superior IMHO! On the ATS3 you don't hear the opposite sideband note bleeding through like you do on the KX1.

The KX1 is a nice setup but if your 'serious' about cutting your trail weight down ...again the ATS is wins! Of course this depends on your battery, atu and paddle (key) weights but there's ways to get these down as well.

Lots of choices, too little 'play' time.

Steve

I really don't think there is any comparison. The ATS-3 outperforms the KX-1. I know, I have had both, and sold the KX-1! The ONLY advantage is the built in ATU, but even with a separate tuner in another Altoids box, the ATS-3 setup is smaller and lighter. What really decides it? How about $165.00 for the ATS-3A versus $364.00 for the KX1 (WITHOUT the Antenna tuner!).

--

_ _ _ _ _
/ \ / \ / \ / \ / \ John L. Sielke
(W)(2)(A)(G)(N) http://w2agn.net
_/ _/ _/ _/ _/ http://www.blurty.com/users/w2agn
See the underhanded actions of QRP-ARCI®. http://w2agn.net/noarci.html

646. Re: [AT_Sprint] Stupid Question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-18 01:17:27 UTC
From: Thomas Kuehl
Topic: 638 Message: 646

Hi Jim,

Welcome to the list. I have the Elecraft K1 and K2, and the ATS-3A. As was pointed out the K2 is not really a backpacker's radio, but I find provides splendid performance and features for home and portable use. My K1 offers plenty of performance and use-ability features that make it a pleasure to use most anywhere. It is considerably larger and heavier than the the ATS-3A, but it is still a very manageable size even for backpacking.

The ATS-3A is in a size and weight class of its own. But you sacrifice some conveniences - and this comes down to personal preferences - that you would find on most radios, a tuning knob, a frequency display, internal band switching, audio power for a speaker and maybe some ergonomic features. I find the transmitter and receiver performance isn't all that different between the K1 and the ATS-3A. My side-by-side receiver performance test gives a little sensitivity edge to my K1 (similar IF bandwidths used). In reality the ATS-3A receiver is completely adequate and well matched to QRP transmitter power.

I also built the Elecraft KX1 a few years back and put it on the air. My observation was about the same as others; its 3-pole crystal filter allowed too much opposite sideband signal through. I also couldn't stand the wobbly tuning encoder. It was sold 2 weeks after I built it. Many people really like their KX1. The ATS-3A's 4-pole crystal filter is devoid of the opposite sideband, except in the case of very, very strong signals. Then I might get a hint of it.

My main concern with the ATS-3A are the plug-in module, pin and socket durability. I haven't had any problems in the short time of owned it, but I wonder if it will become a problem at some point. Also, I've noticed that every now and then one of the various toroid's will get lifted off the board. That can easily be solved by squeezing a little elastomeric cement under them.

All and all its a pretty neat little radio with a hard to beat price tag. If you miss out on this run, I expect Steve will be bringing something similar or new along before too long.

'73, Thomas - AC7A (Tucson)

jimcur134 <jimcur134@...> wrote:
Sorry if my question is too primitive. Most of you seem like quite
sophisticated amateurs.

I'm really a newbie. I've just learned Morse code (pretty easy, but
not trivial), and I'm studying for the licensing exams. I've built
some electronic kits in the past, and I follow directions with very
great precision. Complexity is not my enemy.

I want to build a QRP radio for several reasons. I want to learn
something about circuitry. I want the learning that comes from
making mistakes, finding them, and correcting them. So, I'm willing

to contribute my share of sweat to the process. However, when I'm done sweating, I don't want a toy. I want a radio that works competently. It should work off a power supply at home, and it should work off a battery when I'm backpacking. It should be a real radio and not some ridiculous toy that half works or works intermittently.

I've tried to scan as many QRP rigs as I can, and as far as I can tell the Sprint IIIA is about as good as it gets. Am I right? Does it compare decently with the German radios (Tramp 8, Mosquita)?

As far as I can tell, nothing available is remotely comparable to the Sprint IIIA. This appears to be ten times as true if we just measure value per dollar.

If all this is true, is it a good time to buy and build this rig, or will there be a Super Spring IV with more bands and full voice and a DVD player available pretty soon?

Sorry if my questions bother your list.

Regards,
Jim Curry
Cut Bank, MT

Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

647. Run for the Bacon, 12/17/2006, 6:00 pm

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-18 01:46:09 UTC
From: AT_Sprint@yahoogroups.com
Topic: 647 Message: 647

Reminder from: AT_Sprint Yahoo! Group
http://groups.yahoo.com/group/AT_Sprint/cal

Run for the Bacon
Sunday December 17, 2006
6:00 pm - 8:00 pm
(This event repeats every month on the third Sunday.)
Location: Your shack or anywhere

Notes:
This Sunday evening, the Flying Pigs Amateur Radio Club International will be holding its monthly Run For The Bacon. This is a friendly, two hour QRP CW Sprint, which is open to ALL radio amateurs, will last from 9:00 - 11:00PM EDT (0200-0400 UTC Monday).

You may work stations once per band on 160, 80, 40, 20, 15 or 10 Meters. Suggested starting frequencies are 1.812, 3.562, 7.044, 14.062, 21.062, and 28.062 MHz.

The exchange is RST, S/P/C (State, Province, Country) and Flying Pigs membership number. If you're not a member of the Flying Pigs, and would like to be; then please cli

All Rights Reserved
Copyright ? 2006
Yahoo! Inc.
http://www.yahoo.com

Privacy Policy:
http://privacy.yahoo.com/privacy/us

Terms of Service:
http://docs.yahoo.com/info/terms/

648. Celebrating too early

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-19 17:45:29 UTC
From: gearjam54
Topic: 648 Message: 648

Hi all,
Well I guess I started celebrating too early as I have run into trouble with my ATS 3. The DDS output freq at TP1 is 7.7 MHZ. The ref oscillator is putting out 40MHZ. (I guess mine is an older model as I have seen posts talk about 50MHZ oscillators) Anyway that's as far as I got today because of work and was looking for any advice that might help me find the problem faster.

Thanks all - Larry, NU4B/QRP

649. Re: Celebrating too early

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-19 18:09:10 UTC
From: Bruce Beford
Topic: 648 Message: 649

The ATS3 uses a 40MHz oscillator. The ATS3A uses a 50MHz. I assume you are talking about an original version ATS3. Do you mean when you go into the calibration routine to look for the 10MHz signal at TP1, you have 7.7MHz? Or just when checking that point when not in the calibration routine?

-Bruce N1RX

--- In AT_Sprint@yahoogroups.com, "gearjam54" <lopwr@...> wrote:
>
> Hi all,
> Well I guess I started celebrating too early as I have run into
> trouble with my ATS 3. The DDS output freq at TP1 is 7.7 MHZ. The ref
> oscillator is putting out 40MHZ. (I guess mine is an older model as I
> have seen posts talk about 50MHZ oscillators) Anyway that's as far as
> I got today because of work and was looking for any advice that might
> help me find the problem faster.
>
> Thanks all - Larry, NU4B/QRP
>

650. Re: [AT_Sprint] Celebrating too early

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-19 20:22:25 UTC
From: Michael Harnage
Topic: 648 Message: 650

If you are talking about during calibration just skip thru the "CF" calibration and proceed to the "CO" calibration. There was a small batch of ATS3's that went out with a bad value in the "CF" calibration code. and maybe this was one? No way to really tell for sure except that you don't get 10MHz. I will try to find my notes to see what you really got.

If it's not that how bout a few more details to help us narrow it down?

Only the ATS3A shipped with the 50MHz oscillators.

-mike/w1mt

--- gearjam54 <lopwr@...> wrote:

> Hi all,
> Well I guess I started celebrating too early as I
> have run into
> trouble with my ATS 3. The DDS output freq at TP1 is
> 7.7 MHZ. The ref
> oscillator is putting out 40MHZ. (I guess mine is an
> older model as I
> have seen posts talk about 50MHZ oscillators) Anyway
> that's as far as
> I got today because of work and was looking for any
> advice that might
> help me find the problem faster.
>
> Thanks all - Larry, NU4B/QRP

Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

651. ATS-3A Keying Waveform

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-19 20:55:03 UTC
From: radio_kx0r
Topic: 651 Message: 651

If you plan to use your ATS-3A on a high supply voltage, like 10 to 12 volts, you should look at your keying waveform with a scope - then you might do an easy mod to improve the shape of the keying envelope.

When I first looked at my rig, I was running on 9V from a variable regulated supply. Rise and fall times were about 2 to 3 ms, which is fair. By sending dits into a 50 ohm attenuator connected to the scope input, I saw the shape of the RF envelope. I dropped the voltage down to about 6V, and the keying was nicer.

When I kicked the power up to 12.0V, the risetime dropped to less than 1 ms, and the fall time showed a sharp, rectangular edge. We've all heard stations on the air with bad clicks, and QRP rigs can make clicks if the keying isn't shaped right. Keying is modulation, and we have to limit our bandwidth by not modulating with frequencies that are too high, which is what we get with a sharp keying envelope.

Steve Weber designed an effective key-shaping circuit into the ATS-3A. RC circuits control the rise and fall times of the P-channel NDT2955 mosfet Q4 that keys the final power stage. R13, R14, C42, and C43 slow down the on-off transitions of Q4's gate so that the final transistors take a few milliseconds to rise and fall with each dit or dah. In order to get good shaping, the key-down "on" gate-source voltage of Q4 must be above its threshold, and the transitions generated by the RC network must move smoothly through the threshold region, so Q4 modulates the output in a continuous manner. When V+ is raised, the key-down voltage on the gate of Q4 shifts up also, and the RC network no longer makes a nice keying envelope. Instead the mosfet gets pulled on and off too fast. I found that if R13, 22K, is replaced by a 56K resistor, the shaping is pretty good for V+ between about 8.5V and 12.0V; but with V+ below 8.5V, Q4 doesn't turn completely on, and below about 8.0V, the rig won't key well.

It's a puzzle to understand the operation of Q4 on the ATS-3 and ATS-3A schematics, because it's a P-channel mosfet, and it operates "upside down". Making the gate more negative with respect to the source turns it on more ☐ this is the opposite of N-channel devices like the 2N7000's in the radio. Furthermore, Q4 is drawn incorrectly - the source symbol should be at the top, connected to V+, as it is on the board.

Steve has optimized the keying circuit for V+ of 6 to 9V, which is OK if you want to run in that range; but my unit needed compensation to key acceptably at 10-12V. (I double-checked to make sure I hadn't stuffed any wrong resistors.) It might be worth adding a jumper or switch so the rig will key well with high or low V+ supplies.

(For additional information on the keying circuit, please see the longer version of this post in the "FILES" section here.)

Please don't get me wrong - I absolutely love this rig!

KX0R

652. FCC ruling -- Morse code

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-19 21:50:37 UTC
From: fixnwrtr
Topic: 652 Message: 652

Now that the FCC has removed the Morse code requirement from licensing, I have seen emails and posts for and against the issue. The FCC ruling affects us all, but how do individual members feel about this?

How do all of you feel about removing the Morse code requirement from licensing? Your comments will be published in the January 2007 issue of the Pikes Peak Radio Amateur Association's newsletter, Zero Beat. Now is your time to be heard. I welcome any and all comments, and will be including the comments on ham radio licenses on cereal boxes, inside Cracker Jacks, grab machines at Denny's. Funny, straight, or just a little wry this is your chance to let everyone know how you feel.

73 as always...

Jackie Cornwell
AC0CA
jcornwell@peoplepc.com

653. Celebrating too early

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-19 22:00:37 UTC
From: gearjam54
Topic: 648 Message: 653

Thanks guys,
for the info. Yes the 7.7MHZ was measured at TP1 during the "CF"
calibration. I will get more details about what's going on, like I said
I had to quit working on it due to work. I will go to the "CO"
calibration also and see what's happenning.
I'll let you guys know and

Thanks again, Larry, NU4B

654. Re: FCC ruling -- Morse code

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-19 22:25:06 UTC
From: Scott Laughlin
Topic: 652 Message: 654

The glossy apple is always a bit sweeter. Those who passed the code and put it behind them, forever, knew that should it come to push or shove they could do Morse. Without Morse requirements the value of the amateur license will be somewhat diminished.

There are those of us who hold Morse dear. Without the code requirement the filter is gone. Those who might have taken to it will never know...unless we step forward and become better Elmers. Somewhere in the Elmering process we should demonstrate the power of that half-watt on a cold winter night.

When Heathkit went away I thought kits were gone forever. Wrong! Today, we have more choices than I've ever seen before.

Maybe our radio future is back where it began, at the bench with a smoking iron and a fistful of parts.

--- In AT_Sprint@yahoogroups.com, "fixnwrtr" <jcornwell@...> wrote:
>
> Now that the FCC has removed the Morse code requirement from
> licensing, I have seen emails and posts for and against the issue.
The
> FCC ruling affects us all, but how do individual members feel about
this?
>
> How do all of you feel about removing the Morse code requirement
from
> licensing? Your comments will be published in the January 2007 issue
> of the Pikes Peak Radio Amateur Association's newsletter, Zero Beat.
> Now is your time to be heard. I welcome any and all comments, and
will
> be including the comments on ham radio licenses on cereal boxes,
> inside Cracker Jacks, grab machines at Denny's. Funny, straight, or
> just a little wry this is your chance to let everyone know how you
feel.
>
> 73 as always...
>
> Jackie Cornwell
> AC0CA
> jcornwell@...
>

655. Re: [AT_Sprint] ATS-3A Keying Waveform

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-20 01:05:01 UTC
From: Kurt Savegnago
Topic: 651 Message: 655

adio_kx0r wrote:
> If you plan to use your ATS-3A on a high supply voltage, like 10 to 12 volts, you should look at your keying waveform with a scope - then you might do an easy mod to improve the shape of the keying envelope.
>
> When I first looked at my rig, I was running on 9V from a variable regulated supply. Rise and fall times were about 2 to 3 ms, which is fair. By sending dits into a 50 ohm attenuator connected to the scope input, I saw the shape of the RF envelope. I dropped the voltage down to about 6V, and the keying was nicer.
>
> When I kicked the power up to 12.0V, the risetime dropped to less than 1 ms, and the fall time showed a sharp, rectangular edge. We've all heard stations on the air with bad clicks, and QRP rigs can make clicks if the keying isn't shaped right. Keying is modulation, and we have to limit our bandwidth by not modulating with frequencies that are too high, which is what we get with a sharp keying envelope.
>
> Steve Weber designed an effective key-shaping circuit into the ATS-
> 3A. RC circuits control the rise and fall times of the P-channel NDT2955 mosfet Q4 that keys the final power stage. R13, R14, C42, and C43 slow down the on-off transitions of Q4's gate so that the final transistors take a few milliseconds to rise and fall with each dit or dah. In order to get good shaping, the key-down "on" gate-
> source voltage of Q4 must be above its threshold, and the transitions generated by the RC network must move smoothly through the threshold region, so Q4 modulates the output in a continuous manner. When V+ is raised, the key-down voltage on the gate of Q4 shifts up also, and the RC network no longer makes a nice keying envelope. Instead the mosfet gets pulled on and off too fast. I found that if R13, 22K, is replaced by a 56K resistor, the shaping is pretty good for V+ between about 8.5V and 12.0V; but with V+ below 8.5V, Q4 doesn't turn completely on, and below about 8.0V, the rig won't key well.
>
> It's a puzzle to understand the operation of Q4 on the ATS-3 and ATS-
> 3A schematics, because it's a P-channel mosfet, and it operates "upside down". Making the gate more negative with respect to the source turns it on more ? this is the opposite of N-channel devices like the 2N7000's in the radio. Furthermore, Q4 is drawn incorrectly - the source symbol should be at the top, connected to V+, as it is on the board.
> Steve has optimized the keying circuit for V+ of 6 to 9V, which is OK if you want to run in that range; but my unit needed compensation to key acceptably at 10-12V. (I double-checked to make sure I hadn't stuffed any wrong resistors.) It might be worth adding a jumper or switch so the rig will key well with high or low V+ supplies.
>
> (For additional information on the keying circuit, please see the longer

version of this post in the "FILES" section here.)
>
> Please don't get me wrong - I absolutely love this rig!
> KX0R

I'm going to see if I can get a hold of a 56k resistor and prepare to do the swap as I build my 3A. I mean a 12V 1.2Ah battery isn't that heavy and a 12V 7.5Ah batter isn't that really big of a deal to carry around.
I even have an 800maH 12V gel cell that really isn't much heavier than three C cells. That 800maH is probably going to run longer than a 9V transistor battery for crying out loud.

Kurt

656. Re: ATS-3A Keying Waveform

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-20 06:36:15 UTC
From: radio_kx0r
Topic: 651 Message: 656

--- In AT_Sprint@yahoogroups.com, Kurt Savegnago <ksaves2@...> wrote:
>
> adio_kx0r wrote:
> > If you plan to use your ATS-3A on a high supply voltage, like 10 to 12 volts,
> you should look at your keying waveform with a scope - then you might do an easy
> mod to improve the shape of the keying envelope.
> >
> > When I first looked at my rig, I was running on 9V from a variable regulated
> supply. Rise and fall times were about 2 to 3 ms, which is fair. By sending
> dits into a 50 ohm attenuator connected to the scope input, I saw the shape of
> the RF envelope. I dropped the voltage down to about 6V, and the keying was nicer.
> >
> > When I kicked the power up to 12.0V, the risetime dropped to less than 1 ms,
> and the fall time showed a sharp, rectangular edge. We've all heard stations on
> the air with bad clicks, and QRP rigs can make clicks if the keying isn't shaped
> right. Keying is modulation, and we have to limit our bandwidth by not
> modulating with frequencies that are too high, which is what we get with a sharp
> keying envelope.
> >
> > Steve Weber designed an effective key-shaping circuit into the ATS-
> > 3A. RC circuits control the rise and fall times of the P-channel NDT2955
> mosfet Q4 that keys the final power stage. R13, R14, C42, and C43 slow down the
> on-off transitions of Q4's gate so that the final transistors take a few
> milliseconds to rise and fall with each dit or dah. In order to get good
> shaping, the key-down "on" gate-
> > source voltage of Q4 must be above its threshold, and the transitions
> generated by the RC network must move smoothly through the

threshold region, so
> Q4 modulates the output in a continuous manner. When V+ is raised, the key-down
> voltage on the gate of Q4 shifts up also, and the RC network no longer makes a
> nice keying envelope. Instead the mosfet gets pulled on and off too fast. I
> found that if R13, 22K, is replaced by a 56K resistor, the shaping is pretty
> good for V+ between about 8.5V and 12.0V; but with V+ below 8.5V, Q4 doesn't
> turn completely on, and below about 8.0V, the rig won't key well.
> >
> > It's a puzzle to understand the operation of Q4 on the ATS-3 and ATS-
> > 3A schematics, because it's a P-channel mosfet, and it operates "upside
> down". Making the gate more negative with respect to the source turns it on
> more □ this is the opposite of N-channel devices like the 2N7000's in the radio.
> Furthermore, Q4 is drawn incorrectly - the source symbol should be at the top,
> connected to V+, as it is on the board.
> > Steve has optimized the keying circuit for V+ of 6 to 9V, which is OK if you
> want to run in that range; but my unit needed compensation to key acceptably at
> 10-12V. (I double-checked to make sure I hadn't stuffed any wrong resistors.)
> It might be worth adding a jumper or switch so the rig will key well with high
> or low V+ supplies.
> >
> > (For additional information on the keying circuit, please see the longer
> version of this post in the "FILES" section here.)
> >
> > Please don't get me wrong - I absolutely love this rig!
> > KX0R
>
> I'm going to see if I can get a hold of a 56k resistor and prepare to do the
> swap as I build my 3A. I mean a 12V 1.2Ah battery isn't that heavy and a 12V
> 7.5Ah batter isn't that really big of a deal to carry around.
> I even have an 800maH 12V gel cell that really isn't much heavier than
> three C cells. That 800maH is probably going to run longer than a

9V
> transistor battery for crying out loud.
>
> Kurt
>
Kurt,

12V is a little high for this radio unless you're real well matched to 50 ohms and very careful - at least that's what Steve says in his manual. The new QBSA regulator only goes up to 11V, which is for a reason.

I get a bit over 5W on all bands at 12.0V, and at 13V from a fully charged gel cel you might be pushing those three little 2N7000's pretty hard. You're right that 800 maH will run a lot longer than a 9V transistor battery - the logic of using a little one-way battery escapes me. I'm using three lithium ion cells, and they run from 12V down to 10V, so that's why I used the 56K resistor to replace R13. If you're planning to operate above 12V, you could go a little higher than 56K, maybe even up to 68K, for optimal keying. Be sure to do tests with a scope to verify your keying.

KX0R

657. Re: [AT_Sprint] Re: ATS-3A Keying Waveform

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-20 12:38:05 UTC
From: Kurt Savegnago
Topic: 651 Message: 657

>>
> Kurt,
>
> 12V is a little high for this radio unless you're real well matched
> to 50 ohms and very careful - at least that's what Steve says in his
> manual. The new QBSA regulator only goes up to 11V, which is for a
> reason.
>
> I get a bit over 5W on all bands at 12.0V, and at 13V from a fully
> charged gel cel you might be pushing those three little 2N7000's
> pretty hard. You're right that 800 maH will run a lot longer than a
> 9V transistor battery - the logic of using a little one-way battery
> escapes me. I'm using three lithium ion cells, and they run from 12V
> down to 10V, so that's why I used the 56K resistor to replace R13.
> If you're planning to operate above 12V, you could go a little higher
> than 56K, maybe even up to 68K, for optimal keying. Be sure to do
> tests with a scope to verify your keying.
>
> KX0R

Hmmmmm,

I've seen the run times with the 9V transistor batteries and yes there are some nice lithium packs out there. I have an 11.1 LiPoly pack to run a tracking transmitter and an unused 800maH 11.1V LiPoly besides the 12V gel cells. Sounds to me that it might be good to come up with a reliable 12V options for those who would like to run it in that fashion. I'd like to use mine in the base station mode with the QBSA and as isolated as I am, it would be nice to get the full 5 watts out of the unit.

Kurt Savegnago

Kurt Savegnago

658. Re: [AT_Sprint] FCC ruling -- Morse code

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-20 17:40:44 UTC
From: w9ya@arrl.net
Topic: 652 Message: 658

> Now that the FCC has removed the Morse code requirement from
> licensing, I have seen emails and posts for and against the issue. The
> FCC ruling affects us all, but how do individual members feel about
> this?
>
> How do all of you feel about removing the Morse code requirement from
> licensing? Your comments will be published in the January 2007 issue of
> the Pikes Peak Radio Amateur Association's newsletter, Zero Beat. Now is
> your time to be heard. I welcome any and all comments, and will be
> including the comments on ham radio licenses on cereal boxes,
> inside Cracker Jacks, grab machines at Denny's. Funny, straight, or just
> a little wry this is your chance to let everyone know how you feel.
>
> 73 as always...
>
> Jackie Cornwell
> AC0CA
> jcornwell@...

My immediate answer is that I had to learn code at 20 wpm to get the full freq. allocation and the (never previously issued) 4 digit call. More importantly, I would not have bothered had it not been a requirement. Along the way I found a great new mode. And it is now my preferred mode on HF. I run 99 % cw below 30mHz and all of it at speeds greater than 25 wpm when I can get the other guy to go faster.

I fear that soon we will be asked to stop licensing by testing all together. The history of changes to the FCC's licensing system over the past four decades is sufficient proof of where things are headed.

Vy 73;

Bob
w9ya

659. QBSA manual

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-20 18:56:08 UTC
From: Rob
Topic: 659 Message: 659

I've ordered a QBSA and expect to get it this week. I'd like to look over the manual to see what changes I'll have to make to the ATS-3A. I know I'll have to tap the VFO. I'll probably put another RCA jack on the Altoids case for that. Are there other mods I'll have to make? Will Steven allow a copy of the manual to be put in the files section? I'd like to be able to read it before my kit arrives.
Rob
NV5E

660. New file uploaded to AT_Sprint

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-20 19:35:10 UTC
From: AT_Sprint@yahoogroups.com
Topic: 154 Message: 660

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the AT_Sprint
group.

File : /QBSA manual.pdf
Uploaded by : n1rx <bruce.beford@...>
Description : Manual for the QRP Base Station Accessory

You can access this file at the URL:
http://groups.yahoo.com/group/AT_Sprint/files/QBSA%20manual.pdf

To learn more about file sharing for your group, please visit:
http://help.yahoo.com/help/us/groups/files

Regards,

n1rx <bruce.beford@...>

661. Re: QBSA manual

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-20 19:39:07 UTC
From: Bruce Beford
Topic: 659 Message: 661

Rob-

I've posted a copy of the QBSA manual. I'm sure Steve won't mind. I'll pull it if he does. Yes, you will have to add another output for the DDS signal. Steve suggests one point of tapping off this signal in the manual. I used a different approach. Look in the N1RX photo folder to see where I connected the DDS output on my ATS-3. There are no other mods needed for either the ATS3 or 3A.

-Bruce N1RX

--- In AT_Sprint@yahoogroups.com, "Rob" <roblitespeed@...> wrote:
>
> I've ordered a QBSA and expect to get it this week. I'd like to look
> over the manual to see what changes I'll have to make to the ATS-3A.
> I know I'll have to tap the VFO. I'll probably put another RCA jack
> on the Altoids case for that. Are there other mods I'll have to make?

662. ATS3 Not Working..Help!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-20 19:49:01 UTC
From: guitarbuilger
Topic: 662 Message: 662

Hi all !
I'm a new member trying to get on the air with a ATS3.
I've just completed building my ATS3 which I had around for about a year now.
I'm having a few problems...

1. somehow the 3.5 reg was shorted but I unshorted it(now OK..was a solder slash!!)

2. no audio at power up.,,but I'm hearing the normal speaker rumble noise as it powers up but no "ATS-2" <<not sure why it should be that message if I have a ATS3 anyways no audio message

Question
Is there a recommended mod list for the ATS3 version..I getting confused by all the mods etc and now there is the new version.

Is there newer firmware as well?

I'll kept plugging away..maybe make the a DC probe and an RF one too, looks like I might need them for testing.

Thanks to anyone who can help.
David VE3DPC

663. Re: [AT_Sprint] ATS3 Not Working..Help!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-20 20:25:09 UTC
From: Michael Harnage
Topic: 662 Message: 663

Hi David,

Welcome aboard!

The rig sounds off ATS-2 because with no filter board connected it thinks a 20M filter board is connected. The 2 is for 20M. Otherwise you might hear ATS-8 ATS-4 ATS-3 if other filter boards are connected.

First thing I do when I get no audio is get the schematic out and then check each part in the audio chain and from the MPU to the audio chain. Look at each part for orientation and soldering under magnification. If that is good, then sometimes reheating each joint can help. Especially check the xtal oscillator (the 4 solder joint one). This part will cause the MPU to not work if it is not oscillating properly. Most often reheating the solder joints on this osc will make a big difference. Try these things and let us know what you get. We can proceed from there. Btw, what test equipment do you have access to?

There is new firmware available, both Steve and myself have updated version since you bought your ATS3.

As far as mods go, I recommend you build it stock first. Then if there is anything you notice comb the archives to see if it has been addressed. Most mods are for minor things that most folks won't care about. The rigs simply work great from the gitgo.

73 de w1mt
mike

--- guitarbuilger <davidp@...> wrote:

> Hi all !
> I'm a new member trying to get on the air with a
> ATS3.
> I've just completed building my ATS3 which I had
> around for about a
> year now.
> I'm having a few problems...
>

Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

664. RE: [AT_Sprint] Re: QBSA manual

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-20 20:06:22 UTC
From: Rob May
Topic: 659 Message: 664

Thanks Bruce. I've looked at your photos before for information. I've used my FCC-1 on the point you use and the one Steve recommends and they seem to work equally well. Looking forward to getting the kit, I'm off work until Jan. 2nd and am looking at building several kits.
Rob
NV5E

>From: "Bruce Beford" <bruce.beford@...>
>Reply-To: AT_Sprint@yahoogroups.com
>To: AT_Sprint@yahoogroups.com
>Subject: [AT_Sprint] Re: QBSA manual
>Date: Wed, 20 Dec 2006 19:39:07 -0000
>
>Rob-
>
>I've posted a copy of the QBSA manual. I'm sure Steve won't mind. I'll
>pull it if he does. Yes, you will have to add another output for the
>DDS signal. Steve suggests one point of tapping off this signal in the
>manual. I used a different approach. Look in the N1RX photo folder to
>see where I connected the DDS output on my ATS-3. There are no other
>mods needed for either the ATS3 or 3A.
>
>-Bruce N1RX
>
>--- In AT_Sprint@yahoogroups.com, "Rob" <roblitespeed@...> wrote:
> >
> > I've ordered a QBSA and expect to get it this week. I'd like to look
> > over the manual to see what changes I'll have to make to the ATS-3A.
> > I know I'll have to tap the VFO. I'll probably put another RCA jack
> > on the Altoids case for that. Are there other mods I'll have to make?
>
>
>
>
>
>Yahoo! Groups Links
>
>
>

_____
Get free, personalized online radio with MSN Radio powered by Pandora
http://radio.msn.com/?icid=T002MSN03A07001

665. Re: [AT_Sprint] ATS3 Not Working..Help!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-20 20:44:27 UTC
From: Michael Harnage
Topic: 662 Message: 665

Ooops make that the DDS. The oscillator clocks the
DDS.

-mike

--- Michael Harnage <w1mt@...> wrote:

> Especially check the
> xtal oscillator (the 4 solder joint one). This part
> will cause the MPU to not work if it is not
> oscillating properly.

_____
Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

666. Re: [AT_Sprint] ATS3 Not Working..Help!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-10-20 20:13:44 UTC
From: Steven Weber
Topic: 662 Message: 666

>1. somehow the 3.5 reg was shorted but I unshorted it(now OK..was a
>solder slash!!)
>

Shorted how? If the raw DC input was shorted to the 3.5V output, that could be a serious problem. (I really don't like the way they set up the pin out on these regulators, having Vin as the center pin can be a problem if your not real carefull)

If that was the case, at a minumum, the MPU will need to be replaced. Depending on what voltage you used to intially power up the rig with, everything else which is powered by the 3.5V regulator could also be damaged. If you used a weak 9V battery as suggested in the manual, then the other parts are probably okay. If you used a 12 volt 7 Ahr gel-cell, then all bets are off.

Assuming there are no damaged parts, the most common reason for not hearing the side tone messages is a missing or bad solder connection to one of the pins on the little mute switch IC. If you plug in a paddle and key the rig and hear the audio hiss switching on and off, then everything is working okay, but the side tone isn't making it to the audio amp.

If it seems the processor is fried, I'd suggest sending back to me for repair.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

667. Re: [AT_Sprint] Re: QBSA manual

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-10-20 19:57:02 UTC
From: Steven Weber
Topic: 659 Message: 667

>I've posted a copy of the QBSA manual. I'm sure Steve won't mind. I'll
>pull it if he does.

No problem. I would have done it, but I'm on dial up with a pay-per-minute
phone service, so I don't like to send big files!

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

668. Re: FCC ruling -- Morse code

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-20 21:25:26 UTC
From: karllued
Topic: 652 Message: 668

I think this might be the answer to Radio Shack's sales problems!
Just put a 1500 watt rig on the shelf at Radio Shack, with one of
their knowledgeable sales persons, who can whisper into your ear upon
purchase, "You know you are suppose to have a license to operate
this, but I won't tell". Then cut funding to the FCC! Hopefully,
with the internet available, there won't be another radio boom like
what happened in the '70's with CB.
--- In AT_Sprint@yahoogroups.com, <w9ya@...> wrote:
>
> > Now that the FCC has removed the Morse code requirement from
> > licensing, I have seen emails and posts for and against the
issue. The
> > FCC ruling affects us all, but how do individual members feel
about
> > this?
> >
> > How do all of you feel about removing the Morse code requirement
from
> > licensing? Your comments will be published in the January 2007
issue of
> > the Pikes Peak Radio Amateur Association's newsletter, Zero Beat.
Now is
> > your time to be heard. I welcome any and all comments, and will be
> > including the comments on ham radio licenses on cereal boxes,
> > inside Cracker Jacks, grab machines at Denny's. Funny, straight,
or just
> > a little wry this is your chance to let everyone know how you
feel.
> >
> > 73 as always...
> >
> > Jackie Cornwell
> > AC0CA
> > jcornwell@...
>
> My immediate answer is that I had to learn code at 20 wpm to get
the full
> freq. allocation and the (never previously issued) 4 digit call.
More
> importantly, I would not have bothered had it not been a
requirement.
> Along the way I found a great new mode. And it is now my preferred
mode on
> HF. I run 99 % cw below 30mHz and all of it at speeds greater than
25 wpm

> when I can get the other guy to go faster.
>
> I fear that soon we will be asked to stop licensing by testing all
> together. The history of changes to the FCC's licensing system
over the
> past four decades is sufficient proof of where things are headed.
>
> Vy 73;
>
> Bob
> w9ya
>

669. Re: [AT_Sprint] Re: FCC ruling -- Morse code

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-20 21:51:05 UTC
From: Kurt
Topic: 652 Message: 669

karllued wrote:
> I think this might be the answer to Radio Shack's sales problems!
> Just put a 1500 watt rig on the shelf at Radio Shack, with one of
> their knowledgeable sales persons, who can whisper into your ear upon
> purchase, "You know you are suppose to have a license to operate
> this, but I won't tell". Then cut funding to the FCC! Hopefully,
> with the internet available, there won't be another radio boom like
> what happened in the '70's with CB.

Hey Listen,

I personally don't think the change in rules is going to do one iota's harm to the current situation. With cell phones, FGRS and yes even CB radios that are still out there, folks have plenty of communications choices and don't have to mess with amateur radio. Only people who will get involved are those who pick up the manuals and find they might be interested in experimenting with the intricacies and the art of radio communications. You are not going to see a bunch of joe blows spending money on equipment just to screw up your airwaves. It costs too much and those beam antennas really get some home owners' associations really pissed off.
Cripes, with an ATS-3 or 3A, one can toss up a wire and indeed make some long distance communications without offending the neighbors.
To do that, yes they need to learn the code and established operators should be ready for some onair elmering should it come to that.

Kurt Savegnago

670. Re: FCC ruling -- Morse code

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-20 22:10:25 UTC
From: fixnwrtr
Topic: 652 Message: 670

You are not going to see a bunch of joe blows
> spending money on equipment just to screw up your airwaves. It costs
too
> much...
>
> Kurt Savegnago

But with rigs like the ATS-3 and all its brothers and sisters, and
soone to be models, it is much more affordable to get on the air. Yes,
the multiband rigs cost a lot, but there are affordable HTs that don't
need a lot of experience or code to use.

Jackie AC0CA
>

671. Re: ATS3 Not Working..Help!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-20 23:59:48 UTC
From: guitarbuilger
Topic: 662 Message: 671

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:

> >1. somehow the 3.5 reg was shorted but I unshorted it(now OK..was
a
> >solder slash!!)

> Shorted how?
The back pin which is VIN I believe was in fact shorted to the output
and Murphy's Law would have it that I used a bench supply for
VIN ...crap!! I was in a rush..never pays..the unit was set to 11-
12VDC and I did see the current meter jump up to 2A.
After I got it unshorted (and turned down the PS to 9VDC)I noticed
that 40MHZ osc was OK.

I should have read the manual closer...I checked only the input plug
and not the RAILS..the diode isolates the rails... I more then likely
killed the MPU?. I'll check in the morning. Is there a easy test?

If I was to send back would you need the filter cards as well?
Just let me know the costs and I'll send back a money order.

I must say I enjoyed building THE ATS3 and think I'm not as worried
about SMT now that I engaged into this.

Thanks for your help,
David

672. Re: ATS3 Not Working..Help!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-21 00:09:04 UTC
From: guitarbuilger
Topic: 662 Message: 672

Thanks Michael.....Steve Weber thinks I might of killed the the MPU?
Hope not but I learnt a lesson...read the manual (see my reply to Steve
for the gory details)
I'll check the unit tommorrow.
Thanks for your response!
Hope to resolve soon.
David VE3DPC
72

673. Re: ATS3 Not Working..Help!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-21 00:22:32 UTC
From: guitarbuilger
Topic: 662 Message: 673

Thanks Mike I feel welcome already.
I did get a response from Steve Weber that indicated I might have toasted the MPU via the 3.5 Reg short. (see my reply to Steve for the details)
So I'll check in the morning.

Do you know of any MPU go no go tests?

As far a test gear I have a 60MHZ digital storage scope, DVM , and a frequency counter.
I'm pretty experienced as I design and program circuits (not much RF)..but I was in a hurry and wanted it working before Christmas...oh well at least I know I like working with SMT!
Thanks again hope to work with you soon(CW)...and I'll keep you posted as to how this problem gets resolved.

David
VE3DPC
73

674. Re: [AT_Sprint] Re: ATS3 Not Working..Help!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-21 12:51:32 UTC
From: Karl Larsen
Topic: 662 Message: 674

guitarbuilger wrote:
> --- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
>
>
>>> 1. somehow the 3.5 reg was shorted but I unshorted it(now OK..was
>>>
> a
>
>>> solder slash!!)
>>>
>
>
>> Shorted how?
>>
> The back pin which is VIN I believe was in fact shorted to the output
> and Murphy's Law would have it that I used a bench supply for
> VIN ...crap!! I was in a rush..never pays..the unit was set to 11-
> 12VDC and I did see the current meter jump up to 2A.
>
That is a bad sign. But do check the 3 volts now and see if it is
really 3 volts. If your lucky a capacitor might have died. If not then
you will be smart to send it to Steve.

Karl

> After I got it unshorted (and turned down the PS to 9VDC)I noticed
> that 40MHZ osc was OK.
>
> I should have read the manual closer...I checked only the input plug
> and not the RAILS..the diode isolates the rails... I more then likely
> killed the MPU?. I'll check in the morning. Is there a easy test?
>
> If I was to send back would you need the filter cards as well?
> Just let me know the costs and I'll send back a money order.
>
> I must say I enjoyed building THE ATS3 and think I'm not as worried
> about SMT now that I engaged into this.
>
> Thanks for your help,
> David
>
>
>
>
> Yahoo! Groups Links

>
>
>
>
>
>

675. Test---Please ignore!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-22 19:11:05 UTC
From: Kenneth Moorman
Topic: 675 Message: 675

Test

676. Re: [AT_Sprint] Re: FCC ruling -- Morse code

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-26 21:24:59 UTC
From: kr4ez@aol.com
Topic: 652 Message: 676

the bad thing about the elimenation of the code test is
that many will never dicover how great cw is to operate.
i started as ano code tech and unwillingly learned code
to get on the hf bands. then i found out that cw was more
fun than voice. with out the code requirment many will
nevermake this decovery.

-----Original Message-----

From: Kurt <ksaves2@...>
Subj: Re: [AT_Sprint] Re: FCC ruling -- Morse code
Date: Wed Dec 20, 2006 5:07 pm
Size: 2K
To: AT_Sprint@yahoogroups.com

karllued wrote:
> I think this might be the answer to Radio Shack's sales
problems!
> Just put a 1500 watt rig on the shelf at Radio Shack,
with one of
> their knowledgeable sales persons, who can whisper into
your ear upon
> purchase, "You know you are suppose to have a license
to operate
> this, but I won't tell". Then cut funding to the FCC!
Hopefully,
> with the internet available, there won't be another radio
boom like
> what happened in the '70's with CB.

Hey Listen,

I personally don't think the change in rules is going
to do one iota's
harm to the current situation. With cell phones, FGRS and
yes even CB
radios that are still out there, folks have plenty of communicati
ns
choices and don't have to mess with amateur radio. Only
people who will
get involved are those who pick up the manuals and find
they might be
interested in experimenting with the intricacies and the art of
radio communications. You are not going to see a bunch
of joe blows
spending money on equipment just to screw up your airwaves.

It costs too
much and those beam antennas really get some home owners'
associations
really pissed off.
Cripes, with an ATS-3 or 3A, one can toss up a wire and
indeed make
some long distance communications without offending the
neighbors.
To do that, yes they need to learn the code and established
operators
should be ready for some onair elmering should it come to that.

Kurt Savegnago

Yahoo! Groups Links

677. Re: [AT_Sprint] Re: FCC ruling -- Morse code

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-26 21:16:07 UTC
From: Kurt
Topic: 652 Message: 677

Perhaps, but I don't think one is going to see a large influx
of people into ham radio simply because the CW requirement has
been dropped. Times have changed. One can email, use an online
internet phone essentially for free, FGRS radios for short range
communications.
You will still have perhaps a trickle of folks who are intrigued by
the prospect of a long-distance contact with a small QRP
radio. I know I am.

Kurt

kr4ez@... wrote:
> the bad thing about the elimenation of the code test is
> that many will never dicover how great cw is to operate.
> i started as ano code tech and unwillingly learned code
> to get on the hf bands. then i found out that cw was more
> fun than voice. with out the code requirment many will
> nevermake this decovery.
>
> -----Original Message-----
>
> From: Kurt <ksaves2@...>
> Subj: Re: [AT_Sprint] Re: FCC ruling -- Morse code
> Date: Wed Dec 20, 2006 5:07 pm
> Size: 2K
> To: AT_Sprint@yahoogroups.com
>
> karllued wrote:
>
>>I think this might be the answer to Radio Shack's sales
>
> problems!
>
>>Just put a 1500 watt rig on the shelf at Radio Shack,
>
> with one of
>
>>their knowledgeable sales persons, who can whisper into
>
> your ear upon
>
>>purchase, "You know you are suppose to have a license
>
> to operate
>

>>this, but I won't tell". Then cut funding to the FCC!
>
> Hopefully,
>
>>with the internet available, there won't be another radio
>
> boom like
>
>>what happened in the '70's with CB.
>
>
> Hey Listen,
>
> I personally don't think the change in rules is going
> to do one iota's
> harm to the current situation. With cell phones, FGRS and
> yes even CB
> radios that are still out there, folks have plenty of communicati
> ns
> choices and don't have to mess with amateur radio. Only
> people who will
> get involved are those who pick up the manuals and find
> they might be
> interested in experimenting with the intricacies and the art of
> radio communications. You are not going to see a bunch
> of joe blows
> spending money on equipment just to screw up your airwaves.
> It costs too
> much and those beam antennas really get some home owners'
> associations
> really pissed off.
> Cripes, with an ATS-3 or 3A, one can toss up a wire and
> indeed make
> some long distance communications without offending the
> neighbors.
> To do that, yes they need to learn the code and established
> operators
> should be ready for some onair elmering should it come to that.
>

678. Re: [AT_Sprint] Re: FCC ruling -- Morse code

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-27 12:59:37 UTC
From: Kurt Savegnago
Topic: 652 Message: 678

You're right unless some enthusiastic shows them
the fun of the process. :-)

Kurt

kr4ez@... wrote:
> the bad thing about the elimenation of the code test is
> that many will never dicover how great cw is to operate.
> i started as ano code tech and unwillingly learned code
> to get on the hf bands. then i found out that cw was more
> fun than voice. with out the code requirment many will
> nevermake this decovery.
>
> -----Original Message-----
>
> From: Kurt <ksaves2@...>
> Subj: Re: [AT_Sprint] Re: FCC ruling -- Morse code
> Date: Wed Dec 20, 2006 5:07 pm
> Size: 2K
> To: AT_Sprint@yahoogroups.com
>
> karllued wrote:
>> I think this might be the answer to Radio Shack's sales
> problems!
>> Just put a 1500 watt rig on the shelf at Radio Shack,
> with one of
>> their knowledgeable sales persons, who can whisper into
> your ear upon
>> purchase, "You know you are suppose to have a license
> to operate
>> this, but I won't tell". Then cut funding to the FCC!
> Hopefully,
>> with the internet available, there won't be another radio
> boom like
>> what happened in the '70's with CB.
>
> Hey Listen,
>
> I personally don't think the change in rules is going
> to do one iota's
> harm to the current situation. With cell phones, FGRS and
> yes even CB
> radios that are still out there, folks have plenty of communicati
> ns
> choices and don't have to mess with amateur radio. Only

> people who will
> get involved are those who pick up the manuals and find
> they might be
> interested in experimenting with the intricacies and the art of
> radio communications. You are not going to see a bunch
> of joe blows
> spending money on equipment just to screw up your airwaves.
> It costs too
> much and those beam antennas really get some home owners'
> associations
> really pissed off.
> Cripes, with an ATS-3 or 3A, one can toss up a wire and
> indeed make
> some long distance communications without offending the
> neighbors.
> To do that, yes they need to learn the code and established
> operators
> should be ready for some onair elmering should it come to that.
>
> Kurt Savegnago
>

679. Reducing regulated 13.6 VDC power to 12 VDC

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-28 01:55:29 UTC
From: Gil Stacy
Topic: 679 Message: 679
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

680. Re: Reducing regulated 13.6 VDC power to 12 VDC

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-28 17:48:34 UTC
From: radio_kx0r
Topic: 679 Message: 680

Gil,

Using the L7812 regulator is a pretty good idea, but there could be a problem. The L7812, like most of the 78XX group of regulators, has a dropout voltage of 2 volts typical at 1A. This means that if we have an input of 13.6V, and a dropout voltage of 2.0V, our output is at 11.6V, which means the regulator "drops out" of regulation and does not function correctly. We need to supply a minimum of 14.0V to stay in controlled regulation. In the real world we need to supply at least 15.0V, measured at 1A, to provide some margin for voltage sag, resistive losses, surges, transients, etc. In commercial practice we would probably supply at least 16V or 17V nominal on the input.

A better idea for an input of 13.6V would be to use a low-dropout regulator. Therer are many possibilities here, but a quick look shows that Mouser sells the ST L4940V12 as their p/n 511-L4940V12 for $1.48. The data sheet link is:
http://www.st.com/stonline/books/pdf/docs/2141.pdf
This 12V output device has a dropout of about 0.5V at 1.5A and looks like it would work well for dropping 13.6V down to 12.0v. This is a TO-220 device, and it would need a small heatsink. The specs indicate it would handle the ATS rigs easily.

I have never used this regulator IC, so my hope here is that someone else in this group would comment or recommend this or another device.

The QBSA won't handle the problem of dropping 13.6V to 12.0V, since it uses the LM317T and has similar dropout issues, plus there is a an additional dropout from the 1N4007 reverse-protection diode; also the design maximum voltage output of the QBSA is closer to 11.0V.

A crude but effective way to drop 13.6V to about 12V is to put two diodes in series with the supply line. These can be 1N4001, 1N4004, 1N4007, 1N5401, etc. Each diode drops the voltage about 0.7V.

Good luck!

KX0R
--- In AT_Sprint@yahoogroups.com, "Gil Stacy" <gilstacy@...> wrote:
>
> Those of you with regulated power sources of 13.6 VDC wishing to reduce
> power to 12 VDC for use with the ATS series of kits, may wish to use a three
> lead regulator, L7812, available from Mouser. Scroll down page for the

> three component voltage regulator circuit:
> http://www.amqrp.org/kits/micro908/buildersnotes.html#Max%20Supply%
20Voltage%20is%2012V
>
> 73, Gil NN4CW
>

681. Re: [AT_Sprint] Re: Reducing regulated 13.6 VDC power to 12 VDC

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-28 18:43:59 UTC
From: Gil Stacy
Topic: 679 Message: 681
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

682. Re: [AT_Sprint] Re: Reducing regulated 13.6 VDC power to 12 VDC

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-28 19:54:45 UTC
From: Mark Brueggemann
Topic: 679 Message: 682

--- Gil Stacy <gilstacy@...> wrote:

> I got nowhere near the predicted drop in voltage
> and got tired of driving to RS to buy more diodes. <g>.

It *does* depend on how much current you're pulling through them. As an example, a 1N4001 has .6V drop at 10mA, but around a volt at 1A. If you have a dynamic load, your voltage will bounce around a bit, more or less depending on how many diodes you're using. It's not a very elegant solution.

Mark K5LXP
Albuquerque, NM

683. Re: Reducing regulated 13.6 VDC power to 12 VDC

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-28 23:46:47 UTC
From: radio_kx0r
Topic: 679 Message: 683

--- In AT_Sprint@yahoogroups.com, Mark Brueggemann <qrq_cw@...> wrote:

Mark is exactly right. A low-dropout regulator would regulate the
voltage much better.

KX0R

>
> --- Gil Stacy <gilstacy@...> wrote:
>
> > I got nowhere near the predicted drop in voltage
> > and got tired of driving to RS to buy more diodes. <g>.
>
> It *does* depend on how much current you're pulling through
> them. As an example, a 1N4001 has .6V drop at 10mA, but
> around a volt at 1A. If you have a dynamic load, your
> voltage will bounce around a bit, more or less depending
> on how many diodes you're using. It's not a very elegant
> solution.
>
>
> Mark K5LXP
> Albuquerque, NM
>

684. Re: Reducing regulated 13.6 VDC power to 12 VDC

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-28 23:56:36 UTC
From: radio_kx0r
Topic: 679 Message: 684

--- In AT_Sprint@yahoogroups.com, "Gil Stacy" <gilstacy@...> wrote:

Gil,

No, the fuse won't prevent the dropout. I've played around with the LM317 and 78XX series of regulators enough to know that running any of them close to the dropout point isn't good practice. The output voltage may not regulate during the keyed wave, possibly causing problems in how the keying sounds.

Please read my other post (and word file in the "Files" section here) that discuss the keying shaping and possible mods you may need to run at 12V. This is another subject, not related to the dropout issue.

KX0R

>
> Thanks for the discussion.
> I've tried placing IN4001's in series once before and I believe they were
> wired correctly, but I got nowhere near the predicted drop in voltage and
> got tired of driving to RS to buy more diodes. <g>. Perhaps I didn't wire
> them correctly. Wouldn't be the first time. If you expect a dropout of 2
> volts at 1A, does this mean if the current hits 1 A, the dropout occurs.? If
> this is so, would Steve's recommended inline fuse of .5 A prevent this drop
> out?
> 73, Gil NN4CW
>

685. Re: [AT_Sprint] Filter Module Storage in Box Lid

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-29 03:06:00 UTC
From: kr4ez@aol.com
Topic: 607 Message: 685

i glue connectors inside of my incloser but i made a rather large incloser.

-----Original Message-----

From: "radio_kx0r" <careyfuller@...>
Subj: [AT_Sprint] Filter Module Storage in Box Lid
Date: Mon Dec 11, 2006 14:33
Size: 3K
To: AT_Sprint@yahoogroups.com

All four ATS-3A filter modules will fit inside the Altoids box
without interference with the main board! Take a look at the photos
I posted here, and the idea is easy to see. Three boards are held in
the lid of the box by plastic 4-40 x 5/16" screws and small threaded
standoffs. There's enough room, provided the placement is accurate.

This idea is mainly for backpacking use, to avoid losing or damaging
the filter modules. This idea isn't right for everyone, since you
have to drill holes in your filter boards and box lid, and there's
some risk. You have to measure and fit the boards carefully, as
there's only about 1 or 2mm to play around with in each direction.

At least one, and preferably two, of the filter boards must have two
corners rounded as shown in the pictures. That's the only way to
mount one of them far enough toward the end of the box lid, so the
other two boards will fit. The 20M and 80M boards are the ones to be
rounded - don't round the other two. In addition all four boards
must be shortened by 2 or 3mm at their bottom ends. This is easy to
do with large dikes. Be sure you don't cut or file too deeply and
remove too much of the ground traces on the boards.

The reason to shorten the boards is that there is a clearance problem
between the bottom end of all three boards and the back lip of the
box bottom as the box lid swings down in an arc. This isn't obvious
at first!

Two clearance holes must be drilled in each board. I used a #33
drill for my 4-40 screws, and there's just enough room on the boards -
unfortunately the band labels are right where the holes must go. You
might choose smaller hardware if you can figure out how to screw on
the standoffs or whatever you use for "nuts" to hold the boards in
place in the lid. I use small threaded standoffs and that fit a
Heath nutstarter - fingers will work, but the nutstarter is better.
Don't use a nutdriver because you might damage parts on the boards.

I ended up gluing my various toroids to the filter boards with a bit
of 5-minute epoxy. This helps keep them where they belong and may

avoid damage if they catch on something during handling.

Hopefully some of you will have better ideas, or take this one to the next level. The threaded standoffs are a bit tedious, and there might be something like little rubber plugs that would just push on and stay well enough to hold the boards.

I thought of using Velcro to hold the boards inside the lid, but I decided it would be too thick for the third board, plus I didn't want to glue Velcro to the back of my filters.

Thin sheet magnetic material - like for refrigerator magnets - might work, since it will stick to the Altoids box lid. The stuff I have here isn't strong enough, however, and it would have to be glued to the back of the boards.

I though of using more SIP sockets to hold the boards by their pins, since that would allow easy swapping, but I couldn't work out the orientation. Others have used foam to hold the pins for storage - this idea is on some of the photos posted here - but it won't fit.

I tested the ATS-3A with all modules stored inside the box, and I'm still getting more than 5W on all bands, with 12.0V in. Opening and closing the lid has no effect on the power output. If you try this mod, be sure to retune the trimmer caps on your modules when you're finished.

72/73
KX0R

Yahoo! Groups Links

686. Photos of QBSA in BLT Case

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-29 03:24:51 UTC
From: radio_kx0r
Topic: 686 Message: 686

I just posted 3 photos showing my QBSA built in a BLT case - please see the "Photos" section of this site.

Here are a few points to watch out for (this is the stuff I screwed up or that caused me grief):

1) I would describe the fit as "tight" - I ended up filing almost 1mm off the back edge of the PC board. This may be due to dimensional issues in my BLT case.

2) Trimmer C19 must be mounted below the board if you use the BLT case. Please remember to drill a hole in the bottom of the BLT case for adjustment of C19 BEFORE you mount the board, connectors, and cables!

3) I mounted LM317 (U5) underneath the board per Steve Weber's suggestion, and I fastened it to the bottom of the case with a heat-conducting insulator and plastic shoulder washer. The screw that goes through the shoulder washer must be inserted BEFORE the rear panel is installed - otherwise you can't get to the nut. You could put the nut on underneath the unit - Steve has wisely provided a hole in the PC board so you can access the top of U5 - but whatever you do, don't mount U5 until you're all through drilling holes and fooling around with the PC board.

4) The two pots on the front of the display board have little green plastic blips that protrude about 1mm. You will have to cut them off with flush cutters to get the display board in close to the front panel. This causes no problems.

5) I used separate connectors for every signal - that meant seven connectors on the rear panel. This is a lot more work than using a single multifunction connector - someone else here suggested a DIN connector - nice idea.

6) If you don't yet have a step drill (Unibit), you'd better get one for packaging jobs like this. They are great!

7) I used the "drill many holes and file" method to make the rectangular opening for the display. I ended up a little too large - be sure all your holes are well within your marks. Filing the BLT case is easy.

8) Steve's instructions are very good as far as he goes - read carefully and do what he says. He leaves you with options and choices.

9) The calibration routine works well. Remember that you can use direct entry to get the ATS-3A down to 10.0000 Mhz or up to 15.0000 Mhz after you're all through with your cal. That will let you compare your frequency with WWV. Transmit to a dummy load or attenuator and listen to both carriers together with another receiver - this is a good check.

10) I was not able to calibrate to the exact last digit of the QBSA "dead on" on all four bands after running through the entire cal a couple of times. +/- 100 hz error isn't bad, considering that there are several steps where small errors may combine.

The QBSA is a very nice unit, and a lot of thought has been put into the design. The pc boards assemble very well, and the quality of the layout is obvious, even with a couple of minor errors that Steve mentions. I think if you liked building your ATS rig, you'll enjoy the QBSA kit also!

687. QBSA with 12V Output

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-29 04:17:13 UTC
From: radio_kx0r
Topic: 687 Message: 687

The QBSA kit is designed to deliver no more than 11 volts DC power to the ATS rigs that connect to it. The LM317T regulator circuit adjusts from about 6V to 11V. Steve Weber even added a zener diode D3 into this adjustable regulator, so that if you disconnect or misconnect the voltage adjust pot, the output of the regulator still won't go high enough to damage your ATS rig.

Of course there are some of us who want to operate with 12 volts instead of 11....even though we acknowledge that 11V is safer, and Steve recommends 11V for good reasons....

Here's what you can do:

1) Remove zener D3, 1N5231B, 5.1V, and replace it with a higher-voltage zener. I used a 1N4736A, 6.8V, that I had available. The 1N5235B is also 6.8V. A better choice might be a 6.2V zener like 1N5234B or 1N4735A. The zener clamps the Vmax end of the adjustment range.

2) Remove R25, 220 ohms, and replace it with 200 ohms. With this combination you'll now see about 6.3V at minimum voltage, and about 12.7V at the top. This might be too high.

3) I didn't want the maximum up at 12.7V, so I added a 10K resistor in parallel with D3. That lowered the maximum output to about 12.1V. This is nice. I get about 5W out at 12.1V. I have a polyswitch in my ATS-3A, and that drops the supply a tiny bit, so I'm really running at close to 12.0V into the Schottky protection diode on the board.

4) If you run your QBSA up to 12.1V with this mod, you will need to supply at least 15V input. 15.5V is a good choice. Since input cap C8 is rated at 16V, don't exceed 16V input!

5) Please DO NOT run your ATS rig on 12V unless you understand the risk, have a good 50-ohm match, and limit your key-down time.

Please read my other post and word file (Files Section) here about keying problems when running at higher voltages. Even at 11V the key shaping on my ATS-3A wasn't great before I changed it.

72/73
KX0R

688. Headphone adapter

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-29 18:47:25 UTC
From: Kurt
Topic: 687 Message: 688

Hey,

I found when I have tried to use a stereo headphone with a rig that sometimes I only hear audio in one channel. Is there a stereo to mono adapter plug one could try to get the single channel into both ears?

I don't mean to apply this to the Sprint as mine is not build yet and I haven't gone over the building instructions closely. Might be with the ATS-3(A) that a stereo headphones works?

Kurt

689. Re: [AT_Sprint] Headphone adapter

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-29 21:14:42 UTC
From: Michael Harnage
Topic: 687 Message: 689

Stereo phones work FB on all ATS rigs. Hit radio shack
for adaptors for other rigs.

73 de w1mt
mike

--- Kurt <ksaves2@...> wrote:

>
> Hey,
>
> I found when I have tried to use a stereo headphone
> with a rig that
> sometimes I only hear audio in one channel. Is
> there a stereo to mono
> adapter plug one could try to get the single channel
> into both ears?
>
> I don't mean to apply this to the Sprint as mine is
> not build yet and I
> haven't gone over the building instructions closely.
> Might be with the
> ATS-3(A) that a stereo headphones works?
>
> Kurt
>
>
>
> Yahoo! Groups Links
>
>
>
>
>

Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

690. Re: [AT_Sprint] Headphone adapter

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-30 14:57:00 UTC
From: kr4ez@aol.com
Topic: 687 Message: 690

yes. radio shack has one. i alwase use one because the mono plug can short one of the cannels to ground. if using a mono plug in a sterio jack donot plug it all the way in so the tiptouches the outer contact. this is how the ats ditects the strait key, grounding the outer contact. if you hold a sterio plug next to a mono plug you will see what i mean.

-----Original Message-----

From: Kurt <ksaves2@...>
Subj: [AT_Sprint] Headphone adapter
Date: Fri Dec 29, 2006 13:47
Size: 1K
To: AT_Sprint@yahoogroups.com

Hey,

I found when I have tried to use a stereo headphone with a rig that sometimes I only hear audio in one channel. Is there a stereo to mono adapter plug one could try to get the single channel into both ears?

I don't mean to apply this to the Sprint as mine is not build yet and I haven't gone over the building instructions closely. Might be with the ATS-3(A) that a stereo headphones works?

Kurt

Yahoo! Groups Links

691. parts identification help please

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-31 02:46:09 UTC
From: michaelt1960
Topic: 691 Message: 691

I started building a ATS-3A kit today and didn't see
the color codes for the first few parts IC, Transistors...

Could anyone tell me what the numbers on the following
parts should be:

D2, U4, U12, Q5

also some chips have these strange identifications:

S256

A7s 42

SL56

2X / (with two dots above..one over the 2X and one over the /)

Any help would be appreciated!

Thanks,

Michael
N2ZDB@...

692. Re: parts identification help please

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-31 08:51:24 UTC
From: Richard
Topic: 691 Message: 692

--- In AT_Sprint@yahoogroups.com, "michaelt1960" <N2ZDB@...> wrote:
>
> I started building a ATS-3A kit today and didn't see
> the color codes for the first few parts IC, Transistors...
>
> Could anyone tell me what the numbers on the following
> parts should be:
>
> D2, U4, U12, Q5
>
> also some chips have these strange identifications:
>
> S256
>
> A7s 42
>
> SL56
>
> 2X / (with two dots above..one over the 2X and one over the /)
>
> Any help would be appreciated!
>
> Thanks,
>
> Michael
> N2ZDB@...
>

Michael,

There are references to most of the markings on the
parts placement diagrams and within the text of the
instructions.

Regarding the parts in question:

On Page 13 in the diagram (IC, Transistor placement),
you will notice that D2 has an 'A7' annotation above it.

The part itself has this same A7.

So,

From the Page 13 diagram:

D2 - A7 (your A7s 42)
U4 - CC5R

From the Page 16 (Bottom Side Parts) diagram

U12 - SLFJ
Q5 - 2X (your 2X /)

Regarding markings on parts

S256 - The marking is S2 (56 is a date code according to instructions)
This is D1

A7s (42 written at 90 angle to A7s) - A7
This is D2

SL56 (not sure about this one - there is the SLFJ part - U12)

2X /
Q5

I think an earlier posting suggesting that I read
the instructions two or three times before starting was
some of the best advice I have received so far.

It took me a couple of readings to feel confident with
which part was which.

Good luck with your rig. I'm building mine right now too.
Hopefully, I'll have it running before too long.

73,

Richard
KG4PBG

693. Re: [AT_Sprint] Re: parts identification help please

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-31 15:49:01 UTC
From: N2ZDB@aol.com
Topic: 691 Message: 693

Richard,

Thanks for your help! I think I probably have everything straightened out now. I was pointed to Page 10 by Steve and that was also a big help.

Your info is appreciated and was very descriptive and helpful.

Have a Happy New Year and good luck with your ATS-3A!

Michael
N2ZDB
http://hometown.aol.com/n2zdb

694. New Member

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-31 16:09:43 UTC
From: asfco
Topic: 694 Message: 694

Hi All;
I have been researching various QRP rigs for awhile and after a couple emails with Steve I have decided to order the ATS-3a. I'm sure there will be questions along the way but I am looking forward to building this kit and getting it on the air.
73
Happy New Year
John W2GB

695. QBSA Display Freezes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-31 16:06:38 UTC
From: radio_kx0r
Topic: 695 Message: 695

I got my QBSA running a few days ago, and it has an interesting behavior. On 30 and 40 meters the unit does just what it should. When you move up or down frequency with the buttons on the ATS-3A, the display reports the changes pretty quickly. Changing the display from khz to mhz mode takes about a second after pushing and holding the function button.

However, on 80M and 20M, the display doesn't update very quickly as I move up or down with the buttons. It sometimes freezes for several seconds, and then the frequency appears to jump on the display. The ATS-3A is changing frequency smoothly and normally, and I verified this by listening to signals while I observed the display freezing.

Likewise, on 80M and 20M, sometimes the display mode won't change from khz to mhz, even when I hold the function button for many seconds. Repeated tries seems to help the mode change from khz to mhz and back. It's slightly frustrating.

When I update the frequency with direct entry, the display shows the new frequency immediately. The transition to FWD and REF power occurs normally, usually without delay, on all four bands.

Has anyone else seen this behavior with your QBSA? It's a minor issue, because the correct frequency is displayed eventually. It's strange that 30M and 40M work well, while 80M and 20M have the delays. Perhaps there's a time lag required for computation while the counter/processor does the math?

Steve, are you reading this? Is this normal for the QBSA?

I really like the QBSA. I'm using all the functions on mine, and they all add to the fun of the ATS-3A. The audio amp provides a nice boost with low noise, and the counter is cool!

KX0R

696. Re: [AT_Sprint] New Member

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-31 16:41:50 UTC
From: Thomas Kuehl
Topic: 694 Message: 696

John,

It is an interesting little radio. I hope you have fun constructing it. Just remember it is best suited for 9 or 10V supply, even thought it can be used with 12V. A 12V supply results in very fast CW edge rates and the output MOSFETs are really pushed beyond there maximum specifications. Otherwise, it's a solid performer.

Happy New Year!

Thomas - AC7A

asfco <asfco@...> wrote:
Hi All;
I have been researching various QRP rigs for awhile and after a couple emails with Steve I have decided to order the ATS-3a. I'm sure there will be questions along the way but I am looking forward to building this kit and getting it on the air.
73
Happy New Year
John W2GB

Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

697. Re: [AT_Sprint] QBSA Display Freezes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-31 18:01:49 UTC
From: Steven Weber
Topic: 695 Message: 697

>However, on 80M and 20M, the display doesn't update very quickly as I
>move up or down with the buttons. It sometimes freezes for several
>seconds, and then the frequency appears to jump on the display. The

Humm, had to think about this for a few minutes. Try running it with the
power meter by passed, ie, put the antenna back direct to the rig.

As explained in the manual, to keep the display from jumping around when
you transmit (since the DDS changes from the LO freq to the TX freq), the
display is frozen when it detects power output from the rig. I set the
thrushold pretty low, so it would respond quickly. Maybe too low. Sounds
like the power meter is detecting strong stations and kicking over the
thrushold at times.

The only problem with this "fix" is of course, now the display will now
jump when you transmit.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

698. ATS3A calibration

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-31 18:38:10 UTC
From: aarhus_ca
Topic: 698 Message: 698

Hi

Just finished the ATS-3A and 2 band modules - worked first time! very pleased :-).. used the solder paste / heatgun method and it made for a very neat job.

Trying to do the calibration per the manual - but I cannot get into 'cal mode' - holding in the two keys (menu/RIT) gives a different reponse than just powering up - but not ver nr - nor 'cal' - it give me "20m rx" ten after releasing buttons "xttrt" - if you wait for more than 5/10 sec - it doesn't matter if you wait longer....
'ordinary startup' send '20m' only.
Makes no difference if the 20m module is on or not.

Look forward to finding out how to d ot he cal!

Thanks and 72 John VE3NFK

699. Re: QBSA Display Freezes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-31 19:02:06 UTC
From: radio_kx0r
Topic: 695 Message: 699

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
>
> >However, on 80M and 20M, the display doesn't update very quickly
as I
> >move up or down with the buttons. It sometimes freezes for
several
> >seconds, and then the frequency appears to jump on the display.
The
>
>
> Humm, had to think about this for a few minutes. Try running it
with the
> power meter by passed, ie, put the antenna back direct to the rig.
>
> As explained in the manual, to keep the display from jumping around
when
> you transmit (since the DDS changes from the LO freq to the TX
freq), the
> display is frozen when it detects power output from the rig. I set
the
> thrushold pretty low, so it would respond quickly. Maybe too low.
Sounds
> like the power meter is detecting strong stations and kicking over
the
> thrushold at times.
>
> The only problem with this "fix" is of course, now the display will
now
> jump when you transmit.

Steve,

I did as you suggested and connected the antenna cable straight to the ATS-3A, so the QBSA RCA jacks are unconnected (power meter not in the loop). I also connected to a 50 ohm dummy load.

No change - the behavior is the same and very repeatable. My bug isn't related to RF in the power meter. 80M and 20M freeze and typically take several seconds to update while I hold down an up or down button, and update is erratic. I can see no pattern or regular interval to it, except that an update will occur after 5 or 10 seconds at the most (no total freeze).

When I try to change the state of the display from khz to mhz, it always requires several seconds before anything happens, and sometimes nothing happens unless I try several times. However, the

transition to the power meter display is normal.

On 30M and 40M everything is perfect and repeatable. The button must be OK.

I'm getting my counter signal through a 4.7 pf cap from R16-C33-pin 20 of U7. I have 19 inches of RG-178 cable, and it measures 53pf including connectors. My first guess was the cable, as I originally had 24 inches. Shortening to 19 inches had no effect.

I did not insert my IC's into the board until after the regulators were tested, and I used a wrist strap and grounded ESD mat during assembly.

I do have a scope, so if you can think of signals to check, I can look.

Thanks -

KX0R

700. Re: [AT_Sprint] Re: QBSA Display Freezes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-31 23:26:54 UTC
From: Steven Weber
Topic: 695 Message: 700

>I did as you suggested and connected the antenna cable straight to

>No change - the behavior is the same and very repeatable. My bug

Then I'm stumped for the moment. Anyone else notice this strange behavior?
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

701. Re: [AT_Sprint] ATS3A calibration

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-01 01:59:45 UTC
From: Michael Harnage
Topic: 698 Message: 701

I am out of town right now but if memory serves, try
holding RIT+TUNEUP to get to calibration upon power
up.

73 de w1mt
mike

--- aarhus_ca <john.turgoose@...> wrote:

>
> Trying to do the calibration per the manual - but I
> cannot get into
> 'cal mode' - holding in the two keys (menu/RIT)
> gives a different
> reponse than just powering up - but not ver nr - nor
> 'cal' -

_____
Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

702. Re: ATS3A calibration

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-01 06:50:26 UTC
From: radio_kx0r
Topic: 698 Message: 702

--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:
John,

Mike is right - you hold down the RIT and TUNE UP buttons while you power up the rig, and it goes into cal mode. Read the instructions carefully, and this will go OK. I just had to do it all over again several times for my QBSA, and you can repeat the procedure as needed if you get mixed up or whatever. Just remember that your settings must be saved at the end of the cal - read it over several times in the manual - the instructions are good.

KX0R

> I am out of town right now but if memory serves, try
> holding RIT+TUNEUP to get to calibration upon power
> up.
>
> 73 de w1mt
> mike
>
> --- aarhus_ca <john.turgoose@...> wrote:
>
> >
> > Trying to do the calibration per the manual - but I
> > cannot get into
> > 'cal mode' - holding in the two keys (menu/RIT)
> > gives a different
> > reponse than just powering up - but not ver nr - nor
> > 'cal' -
>
> _____
> Do You Yahoo!?
> Tired of spam? Yahoo! Mail has the best spam protection around
> http://mail.yahoo.com
>

703. Re: ATS3A calibration - Duh!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-01 15:29:06 UTC
From: aarhus_ca
Topic: 698 Message: 703

Thanks guys - Mike and KX0R .... my bad - pushing on the wrong buttons!

All is well - the 10 mhz accurate to 4 dec places (10.0000) without tuning - the passband came up nicely on the scope and it is a livier beast now - made a first QSO yesterday with KC0JKD in MO - 4 watts out on 20 meters - 3 W on the other bands woth a 10.5V battery pack...

One remaining problem - when it is first powered on it gives the most gawd awful squeal that really hurts the eardrums.. I had put a larger cap in C54 - so thinking I might have done something wrong - I replaced it with the original - still SQUEALS ..
if you repower in a short time it is ok...

ideas please?

so now on to the QBSA !

Thanks for your help...

72 John VE3NFK

--- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@...> wrote:
>
> --- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@> wrote:
> John,
>
> Mike is right - you hold down the RIT and TUNE UP buttons while you
> power up the rig, and it goes into cal mode. Read the instructions
> carefully, and this will go OK. I just had to do it all over again
> several times for my QBSA, and you can repeat the procedure as needed
> if you get mixed up or whatever. Just remember that your settings
> must be saved at the end of the cal - read it over several times in
> the manual - the instructions are good.
>
> KX0R
>
>
> > I am out of town right now but if memory serves, try
> > holding RIT+TUNEUP to get to calibration upon power
> > up.
> >
> > 73 de w1mt
> > mike
> >
> > --- aarhus_ca <john.turgoose@> wrote:
> >
> > >

> > > Trying to do the calibration per the manual - but I
> > > cannot get into
> > > 'cal mode' - holding in the two keys (menu/RIT)
> > > gives a different
> > > reponse than just powering up - but not ver nr - nor
> > > 'cal' -
> >
> > _____
> > Do You Yahoo!?
> > Tired of spam? Yahoo! Mail has the best spam protection around
> > http://mail.yahoo.com
> >
>

704. Re: QBSA Display Freezes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-01 17:54:17 UTC
From: Bruce Beford
Topic: 695 Message: 704

I have not specifically seen the 'slow update' described. But I have seen where the response to the function button can be somewhat finicky when the freq counter is measuring a signal above a certain value. I forget exactly where the transition is... somewhere around 8-12 MHz, I forget. If you feed a dds signal into the freq counter, and increase the frquency above a certain point, it has a bit touchier timing on the button to get it to switch frequency readout resolution. It seems a bit harder to 'get it's attention' above a certain freq. I think it might be below 10 MHz where this happens, as I seem to recall noticing it during the initial calibration.

Also, one more thing to keep in mind- when using the QBSA in the ATS mode (as most will do)- The displayed frequency is dependant upon what band the QBSA 'thinks' you are on. It does this based on the frequency it is reading from the DDS in the ATS rig. Steve had to choose certain change-over frequencies to have the display jump to the next band. What does this mean? It means that if you tune outside of a certain range of frequencies on a given band, the QBSA will assume you have changed band modules, and the readout will not be correct. On 80M, I think it is above about 3830 or so..

-Bruce N1RX

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
>
> >I did as you suggested and connected the antenna cable straight to
>
> >No change - the behavior is the same and very repeatable. My bug
>
> Then I'm stumped for the moment. Anyone else notice this strange
behavior?
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://www.qsl.net/kd1jv/
> http://kd1jv.qrpradio.com
>

705. SP w/ATS3a on ice

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-02 04:57:56 UTC
From: steve_n0tu
Topic: 705 Message: 705

Stress tested my ATS3a tonight in the Spartin Sprint. Built a snow cave a few days ago with all the snow we had laying around here from the blizzard. Worked SKN New Years with my ft817 and the SP with ATS3a from the cave. Have to say there's no comparison. The ATS wins! When it got down to 15F the display started to fade and the main tuning was sludgish on the 817. But ATS perked right along! =D Although my little Lithpoly battery only lasted about 70 minutes? Fun experience overall! Some pics on my web: http://www.angelfire.com/planet/goatman/CAVE/SKN.html

Steve/n0tu

706. Re: [AT_Sprint] ATS3A calibration

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2006-12-31 22:00:05 UTC
From: asfco
Topic: 698 Message: 706

HI John;
I will be building this kit shortly..would you please tell me more about your Paste/heatgun method ? I am starting to compile a list of resources to help with the building of this kit and would appreciate any tips..
Thanks
Happy New Year
John W2GB
----- Original Message -----
From: aarhus_ca
To: AT_Sprint@yahoogroups.com
Sent: Sunday, December 31, 2006 1:38 PM
Subject: [AT_Sprint] ATS3A calibration

Hi

Just finished the ATS-3A and 2 band modules - worked first time! very pleased :-).. used the solder paste / heatgun method and it made for a very neat job.

Trying to do the calibration per the manual - but I cannot get into 'cal mode' - holding in the two keys (menu/RIT) gives a different reponse than just powering up - but not ver nr - nor 'cal' - it give me "20m rx" ten after releasing buttons "xttrt" - if you wait for more than 5/10 sec - it doesn't matter if you wait longer....
'ordinary startup' send '20m' only.
Makes no difference if the 20m module is on or not.

Look forward to finding out how to d ot he cal!

Thanks and 72 John VE3NFK

707. Re: [AT_Sprint] SP w/ATS3a on ice

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-02 16:52:51 UTC
From: kb2tqx
Topic: 705 Message: 707

Hello steve,

Love the pics! Brrrrr!

I remember digging snow caves when I was young. Lots of fun.

72/3,

Dave
KB2TQX

======= At 2007-01-01, 23:57:56 you wrote: =======

>Stress tested my ATS3a tonight in the Spartin Sprint. Built a snow
>cave a few days ago with all the snow we had laying around here from
>the blizzard. Worked SKN New Years with my ft817 and the SP with
>ATS3a from the cave. Have to say there's no comparison. The ATS wins!
>When it got down to 15F the display started to fade and the main
>tuning was sludgish on the 817. But ATS perked right along! =D
>Although my little Lithpoly battery only lasted about 70 minutes? Fun
>experience overall! Some pics on my web:
>http://www.angelfire.com/planet/goatman/CAVE/SKN.html
>
>Steve/n0tu
>
>
>
>
>Yahoo! Groups Links
>
>
>

= = = = = = = = = = = = = = = = = = = =

kb2tqx
kb2tqx@...
2007-01-02

708. new Bands for ATS3

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-02 18:32:44 UTC
From: Lutz Bergner
Topic: 708 Message: 708

Hi

Here comes a small progress report about my last activities. Being warned by Steve's experiments with the 80MHz reference oscillator - I tried to find a compromise between low power consumption- and number of bands. I took 60MHz to cover 17m and 15m besides 160m too. Desoldering of the old 40MHz oscillator was a bit tricky. I finally managed it with two soldering irons. Now the new one works nicely . Had to change the spur filter and and the firmware too. In Steves source of the firmware I once discovered commented out code for 3 additional bands. Later versions don't contend it anymore. One had to hold the menu button down while power-up to reach the additional bands. After discussing the matter with Steve I uncommented the code and changed some well documented values regarding the new reference clock. So far it works, but I think I have to merge in the fixes contained in later versions to be completely happy. One pecularity left. When I power on, the RX does not unmute automatically. A dip to the dot- or dash- paddle cures it till I 'd power off next time. That's nothing I think too much about anyway.
First additional band I built was 160m. The sharp RX was a pleasure in the busy contest this weekend. It puts out 2.5W with 9V. Could work stations all over europe with it. Antenna was the strapped together ends of my doublet feeder forming a T- vertical, driven against heater system. Great fun!
Fotos and schematics will follow soon in my photo gallery.
Next will be 15m. I wonder , if I 'll really have to exchange the 'HC04 with a 'AC04. Of course I already have one. I'll try it at least without ;-).
Stay tuned

72s

Lutz, DL2HRP

709. Re: [AT_Sprint] new Bands for ATS3

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-02 19:03:32 UTC
From: Kurt Savegnago
Topic: 708 Message: 709

(Big snip for brevity's sake)

What's next? An all band ATS-4? :-)

Kurt

Slackware user since 1994

710. Re: ATS3A calibration - Duh!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-02 21:10:03 UTC
From: Dave
Topic: 698 Message: 710

> One remaining problem - when it is first powered on it gives the most
> gawd awful squeal that really hurts the eardrums..

I suggest checking the installation of the processor reset chip, u12,
that is mounted on the bottom of the board but had to be rotated from
a normal mounting orientation. It a bit tricky to get all three leads
on the pads when rotated as indicated in the instructions.

Dave, WA3OFF

711. Re: ATS3A calibration

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-02 23:38:26 UTC
From: aarhus_ca
Topic: 698 Message: 711

Hi John

Well - I got one of Cash Olsen's little paste syringe's; then I warmed it to room temp (keep it in the frige otherwise) - and then using a microscope (you can use a magnifier of your own choice of course) - I put a dab of paste on each smt pad.. a strip on the tiny ic's - then 'carefully' placed each component on the board with tweezers - finicky work - I first organized all the parts so I could keep going when I started - I followed the instruction manual - but put the ic's on last. Then I put the board on a coffee warmer to warm it up; and used a 'proper' heat gun (Aoyue 906) waving it gently over the whole board until the parts just 'clicked' into place...
2 'clicked' the wrong way which was a pain to reposition them under heat - but the board got done and worked first pass.

Hope that helped

72 John VE3NFK

--- In AT_Sprint@yahoogroups.com, "asfco" <asfco@...> wrote:
>
> HI John;
> I will be building this kit shortly..would you please tell me more about your Paste/heatgun method ? I am starting to compile a list of resources to help with the building of this kit
> and would appreciate any tips..
> Thanks
> Happy New Year
> John W2GB
> snipped

712. Start up SQUEAL - was Re: ATS3A calibration - Duh!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-02 23:41:37 UTC
From: aarhus_ca
Topic: 698 Message: 712

Hi Dave
Thanks.
checked it - it 'looks' fine under a microscope - but in any case
after the nasty squeal it all works fine so any other ideas please?

72 John VE3NFK

--- In AT_Sprint@yahoogroups.com, "Dave" <dmertz@...> wrote:
>
> > One remaining problem - when it is first powered on it gives the most
> > gawd awful squeal that really hurts the eardrums..
>
> I suggest checking the installation of the processor reset chip, u12,
> that is mounted on the bottom of the board but had to be rotated from
> a normal mounting orientation. It a bit tricky to get all three leads
> on the pads when rotated as indicated in the instructions.
>
> Dave, WA3OFF
>

713. Re: [AT_Sprint] Re: ATS3A calibration - Duh!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-02 22:40:52 UTC
From: Steven Weber
Topic: 698 Message: 713

>> One remaining problem - when it is first powered on it gives the most
>> gawd awful squeal that really hurts the eardrums..
>
>I suggest checking the installation of the processor reset chip, u12,

I think I ran into one which was doing something like that and it turned
out to be a bad connection somewhere in the audio circuit, so I'd poke
around there some.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

714. Re: [AT_Sprint] Re: ATS3A calibration

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-03 03:33:07 UTC
From: Karl Larsen
Topic: 698 Message: 714

aarhus_ca wrote:
> Hi John
>
> Well - I got one of Cash Olsen's little paste syringe's; then I warmed
> it to room temp (keep it in the frige otherwise) - and then using a
> microscope (you can use a magnifier of your own choice of course) - I
> put a dab of paste on each smt pad.. a strip on the tiny ic's - then
> 'carefully' placed each component on the board with tweezers - finicky
> work - I first organized all the parts so I could keep going when I
> started - I followed the instruction manual - but put the ic's on
> last. Then I put the board on a coffee warmer to warm it up; and used
> a 'proper' heat gun (Aoyue 906) waving it gently over the whole board
> until the parts just 'clicked' into place...
> 2 'clicked' the wrong way which was a pain to reposition them under
> heat - but the board got done and worked first pass.
>
Hi This is Karl and Cash Olsen lives in my town. He has demoed the
method you used and did one ATS-3 that is VERY pretty. Which IC's didn't
click the right way? Were they the itsy bitsy switch chips?

73 Karl

> Hope that helped
>
> 72 John VE3NFK
>
>
>
> --- In AT_Sprint@yahoogroups.com, "asfco" <asfco@...> wrote:
>
>> HI John;
>> I will be building this kit shortly..would you please tell me
>>
> more about your Paste/heatgun method ? I am starting to compile a
> list of resources to help with the building of this kit
>
>> and would appreciate any tips..
>> Thanks
>> Happy New Year
>> John W2GB
>> snipped
>>
>
>
>

>
> Yahoo! Groups Links
>
>
>
>
>
>
>

715. VE3NFK Re: ATS3A calibration

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-03 16:20:45 UTC
From: pipesanddrums17
Topic: 698 Message: 715

John VE3NFK;
That method does sound like the way to go however I certainly
don't have anything that fancy here...Looks like I'll just have to be
careful take my time and use a 1/16 tip on my XYtronic 137ESD
soldering station.

--- In AT_Sprint@yahoogroups.com, "aarhus_ca" <john.turgoose@...>
wrote:
>
> Hi John
>
> Well - I got one of Cash Olsen's little paste syringe's; then I
warmed
> it to room temp (keep it in the frige otherwise) - and then using a
> microscope (you can use a magnifier of your own choice of course) -
I
> put a dab of paste on each smt pad.. a strip on the tiny ic's - then
> 'carefully' placed each component on the board with tweezers -
finicky
> work - I first organized all the parts so I could keep going when I
> started - I followed the instruction manual - but put the ic's on
> last. Then I put the board on a coffee warmer to warm it up; and
used
> a 'proper' heat gun (Aoyue 906) waving it gently over the whole
board
> until the parts just 'clicked' into place...
> 2 'clicked' the wrong way which was a pain to reposition them under
> heat - but the board got done and worked first pass.
>
> Hope that helped
>
> 72 John VE3NFK
>
>
>
> --- In AT_Sprint@yahoogroups.com, "asfco" <asfco@> wrote:
> >
> > HI John;
> > I will be building this kit shortly..would you please tell me
> more about your Paste/heatgun method ? I am starting to compile a
> list of resources to help with the building of this kit
> > and would appreciate any tips..
> > Thanks
> > Happy New Year
> > John W2GB

> > snipped
>

716. VE3NFK Re: ATS3A calibration

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-04 00:20:02 UTC
From: aarhus_ca
Topic: 698 Message: 716

That works fine too - I built my first one that way and it worked too...
John

--- In AT_Sprint@yahoogroups.com, "pipesanddrums17" <asfco@...> wrote:
>
> John VE3NFK;
> That method does sound like the way to go however I certainly
> don't have anything that fancy here...Looks like I'll just have to be
> careful take my time and use a 1/16 tip on my XYtronic 137ESD
> soldering station.
>
>
>

717. Re: ATS3A calibration

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-04 00:21:23 UTC
From: aarhus_ca
Topic: 698 Message: 717

No, fortunately it was NOT the little itsy bitsy 3 legged beasts - it
was one of the L's and a nearby cap - so not to bad to rotate back to
position.

--- In AT_Sprint@yahoogroups.com, Karl Larsen <k5di@...> wrote:
>
> aarhus_ca wrote:
> > Hi John
> >
> > Well - I got one of Cash Olsen's little paste syringe's; then I warmed
> > it to room temp (keep it in the frige otherwise) - and then using a
> > microscope (you can use a magnifier of your own choice of course) - I
> > put a dab of paste on each smt pad.. a strip on the tiny ic's - then
> > 'carefully' placed each component on the board with tweezers - finicky
> > work - I first organized all the parts so I could keep going when I
> > started - I followed the instruction manual - but put the ic's on
> > last. Then I put the board on a coffee warmer to warm it up; and used
> > a 'proper' heat gun (Aoyue 906) waving it gently over the whole board
> > until the parts just 'clicked' into place...
> > 2 'clicked' the wrong way which was a pain to reposition them under
> > heat - but the board got done and worked first pass.
> >
> Hi This is Karl and Cash Olsen lives in my town. He has demoed the
> method you used and did one ATS-3 that is VERY pretty. Which IC's
didn't
> click the right way? Were they the itsy bitsy switch chips?
>
> 73 Karl
>
> > Hope that helped
> >
> > 72 John VE3NFK
> >
> >
> >
> > --- In AT_Sprint@yahoogroups.com, "asfco" <asfco@> wrote:
> >
> >> HI John;
> >> I will be building this kit shortly..would you please tell me
> >>
> > more about your Paste/heatgun method ? I am starting to compile a
> > list of resources to help with the building of this kit
> >
> >> and would appreciate any tips..
> >> Thanks

> >> Happy New Year
> >> John W2GB
> >> snipped
> >>
> >
> >
> >
> >
> > Yahoo! Groups Links
> >
> >
> >
> >
> >
> >
>

718. Re: ATS3A calibration - Duh!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-04 00:22:28 UTC
From: aarhus_ca
Topic: 698 Message: 718

Thanks Steve - I'll give that a look at - of course it is aggravating
that it only does it from a very 'cold' start.....
72 John VE3NFK

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
>
>
> >> One remaining problem - when it is first powered on it gives the most
> >> gawd awful squeal that really hurts the eardrums..
> >
> >I suggest checking the installation of the processor reset chip, u12,
>
> I think I ran into one which was doing something like that and it turned
> out to be a bad connection somewhere in the audio circuit, so I'd poke
> around there some.
>
>
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://www.qsl.net/kd1jv/
> http://kd1jv.qrpradio.com
>

719. Start up SQUEAL - was Re: ATS3A calibration - Duh!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-06 15:03:32 UTC
From: aarhus_ca
Topic: 698 Message: 719

I have checked the audio circuitry per Steve - and couldn't find
anything BUT - it ONLY squeals IF there is a module inserted - sounds
like feedback - does it with all modules - new ideas please?

Thanks

72 John VE3NFK

--- In AT_Sprint@yahoogroups.com, "aarhus_ca" <john.turgoose@...> wrote:
>
> Hi Dave
> Thanks.
> checked it - it 'looks' fine under a microscope - but in any case
> after the nasty squeal it all works fine so any other ideas please?
>
> 72 John VE3NFK
>
>
> --- In AT_Sprint@yahoogroups.com, "Dave" <dmertz@> wrote:
> >
> > > One remaining problem - when it is first powered on it gives the
most
> > > gawd awful squeal that really hurts the eardrums..
> >
> > I suggest checking the installation of the processor reset chip, u12,
> > that is mounted on the bottom of the board but had to be rotated from
> > a normal mounting orientation. It a bit tricky to get all three leads
> > on the pads when rotated as indicated in the instructions.
> >
> > Dave, WA3OFF
> >
>

720. Re: [AT_Sprint] Start up SQUEAL - was Re: ATS3A calibration - Duh!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-06 23:21:58 UTC
From: Michael Harnage
Topic: 698 Message: 720

Try it with a 50ohm dummy load and let us know what
happens.

-mike/wm1t

--- aarhus_ca <john.turgoose@...> wrote:

>
> I have checked the audio circuitry per Steve - and
> couldn't find
> anything BUT - it ONLY squeals IF there is a module
> inserted - sounds
> like feedback - does it with all modules - new ideas
> please?
>

Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

721. Start up SQUEAL - was Re: ATS3A calibration - Duh!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-07 02:25:27 UTC
From: aarhus_ca
Topic: 698 Message: 721

you fixed it ! thanks Mike

72 John VE3NFK -

now as I wrote on the WRP-L group - I need to package it and the QBSA - I think I might use the Altoids again - and either use a present box; or build a new one .. I'd just like to make it an easy switch over.... my son suggests that - and a little wooden frame to hold them together.

--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:
>
> Try it with a 50ohm dummy load and let us know what
> happens.
>
> -mike/wm1t
>
>
> --- aarhus_ca <john.turgoose@...> wrote:
>
> >
> > I have checked the audio circuitry per Steve - and
> > couldn't find
> > anything BUT - it ONLY squeals IF there is a module
> > inserted - sounds
> > like feedback - does it with all modules - new ideas
> > please?
> >
>
> _____
> Do You Yahoo!?
> Tired of spam? Yahoo! Mail has the best spam protection around
> http://mail.yahoo.com
>

722. new Bands for ATS3 - the second

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-07 15:48:10 UTC
From: Lutz Bergner
Topic: 708 Message: 722

Hi all,

just worked John - K2VV in MO on 17m with my ATS-3 7 Band Tcvr. :-))
It works definitely. Some things I learned on the way I'd like to share with you.

- Steve is right! :-) It's mandatory to replace the 74HC02 Driver by an 74AC02. The HC02 produces lots of Heat and a totally damaged signal spectrum at least on 15m.

- During my simulations of TX output- network I estimated the optimal load of the 3 paralleled FETs to be 5 Ohms. That seemed to be right. Got 3,4W out on 17m. On 15m I did not dare to use the optimal network because there would be a considerable amount of dissipation at this high frequency with no cooling surfaces. (with the 2N7000). Used kind of Steves compromise dimensioning and got 2.5W out there.

- Fortunately I had no raspy sidetone and other disadvantages so far. Think the 60MHz reference is a good compromise indeed. RX current consumption on 17m is 37,5 mA. I am happy with it. IMHO one should not go even further with this layout and schematic.

- Did merge in all fixes to the old version of Steves Firmware with the "altband" feature included. Now it is equivalent to the 02-20-06 release. All my modifications are commented. Though it's not much : 9996KHz (RWM) calibration for EU, 60MHz refclock, additional bands enabled, swapped paddles (not included) .
One little thing is still left to do - 17m puts out a "ATS-1" like 160m instead of "ATS-7". Steves permition provided I will put the commented source together with schemas and photos into my gallery.

72s

Lutz, a happy DL2HRP

723. Re: [AT_Sprint] new Bands for ATS3 - the second

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-07 16:06:35 UTC
From: John A. Evans - N0HJ
Topic: 708 Message: 723

All I can say is - WOOHOO !!!!!!!!!! What 3 other bands did you end up getting?? 17/15/12m ?? 17/15/10m ??

72 - john - n0hj

Lutz Bergner wrote:
>
> Hi all,
>
> just worked John - K2VV in MO on 17m with my ATS-3 7 Band Tcvr. :-))
> It works definitely.
>

724. Re: [AT_Sprint] new Bands for ATS3 - the second

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-07 16:10:03 UTC
From: John A. Evans - N0HJ
Topic: 708 Message: 724

Nevermind - I see it adds 160/17/15m - by the way, just for clarification - this mod is for the ATS3 or is it the ATS3A ??
Hopefully we will see some additional band module boards/parts kits or perhaps Steve will kit some after he completes testing.

72 - john - n0hj

725. Re: new Bands for ATS3 - the second

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-07 21:58:39 UTC
From: aarhus_ca
Topic: 708 Message: 725

Congratulations, Lutz!

AS I mentioned; I haven't yet built my second ATS-3 - so from this posting; I take it I need to change to the 74AC02 and a 60 mhz oscillator for the main board? I am just trying to collect the appropriate parts before I start!

Tnxs

72 John VE3NFK

--- In AT_Sprint@yahoogroups.com, Lutz Bergner <l.bergner@...> wrote:
>
> Hi all,
>
> just worked John - K2VV in MO on 17m with my ATS-3 7 Band Tcvr. :-))
> It works definitely. Some things I learned on the way I'd like to share
> with you.
>
> - Steve is right! :-) It's mandatory to replace the 74HC02 Driver by an
> 74AC02. The HC02 produces lots of Heat and a totally damaged signal
> spectrum at least on 15m.
>
> - During my simulations of TX output- network I estimated the optimal
> load of the 3 paralleled FETs to be 5 Ohms. That seemed to be right. Got
> 3,4W out on 17m. On 15m I did not dare to use the optimal network
> because there would be a considerable amount of dissipation at this high
> frequency with no cooling surfaces. (with the 2N7000). Used kind of
> Steves compromise dimensioning and got 2.5W out there.
>
> - Fortunately I had no raspy sidetone and other disadvantages so far.
> Think the 60MHz reference is a good compromise indeed. RX current
> consumption on 17m is 37,5 mA. I am happy with it. IMHO one should not
> go even further with this layout and schematic.
>
> - Did merge in all fixes to the old version of Steves Firmware with the
> "altband" feature included. Now it is equivalent to the 02-20-06
> release. All my modifications are commented. Though it's not much :
> 9996KHz (RWM) calibration for EU, 60MHz refclock, additional bands
> enabled, swapped paddles (not included) .
> One little thing is still left to do - 17m puts out a "ATS-1" like 160m
> instead of "ATS-7". Steves permition provided I will put the commented
> source together with schemas and photos into my gallery.
>
>
> 72s

>
> Lutz, a happy DL2HRP
>

726. Re: [AT_Sprint] Re: new Bands for ATS3 - the second

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-08 09:09:31 UTC
From: Lutz Bergner
Topic: 708 Message: 726

Hi John,

my ATS3 was heavily modified before and has all features of the ATS3A
without missing the wideband IF. So it would not make a big difference
though I could not know the impact of the slightly different layout of
both versions.
Here's what you had to do except of all unsoldering - of course :
- Go to Mike's W1MT webpage and get all things/hints you would need for
loading a different firmware. It's very easy and works great. You may
download my version as soon I managed to ask Steve for permission.
- Get a 60MHz SMD 3.5V Crystaloszillator in 5 x 7 mm size. (e.g.
Farnell) ,a 74AC02, NPO Chip- Cs and Toroids. Unsoldering of the old
40/50MHz Oszillator is not easy. I used two soldertips together - one in
each hand.
-Spurfilter:
Remove C38,C39,C40 and replace them with new values.
c38=47p
c39=82p
c40=47p + 6p8
c41= C41 + 4p7
c42= C42 + 2p2
- Make some bandmodules for the new bands.....
give me a week or so to make the artwork ready to publish. If you 'd
prefer to build up an original ATS3 I could simulate ATS3-style
bandmodules for you as well . This would be quickly done with RFSIM99
(google for it - it's great!)and all the lessons I 've learned. My
modules rather fit into ATS3A except the pin layout.
- Load up the new firmware.
- Have lots of fun..

Anyway it worked for me . Cannot _garantee_ that it will work for others
in all circumstances.

72s

Lutz,DL2HRP

Am Sonntag, den 07.01.2007, 21:58 +0000 schrieb aarhus_ca:
> Congratulations, Lutz!
>
> AS I mentioned; I haven't yet built my second ATS-3 - so from this
> posting; I take it I need to change to the 74AC02 and a 60 mhz
> oscillator for the main board? I am just trying to collect the
> appropriate parts before I start!
>

727. AT Sprint 3A kit for sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-08 15:37:58 UTC
From: John Burton
Topic: 727 Message: 727

Greetings Group,
I would like to offer my unbuild ats3a kit to the group in case some one would like to buy one. I have a ways to go to be able to use this radio effective, since I am cw challenged. In the mean time I have decided to tackle Steve's Simple SSB rig listed on his web site and give another try at cw as time allows. So if anyone is interested it would probably be best to contact me at jab3739@... . The price would be the same as I paid Steve.
John
kg9dk

728. Re: new Bands for ATS3 - the second

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-08 15:53:12 UTC
From: aarhus_ca
Topic: 708 Message: 728

Hi Lutz...

Thanks very much - I am in the nice position of having a complete
ATS3 (not A) unassembled - so I can put the right (your!) parts in
first time - I have added the ocs and 74ac02 to my parts order; and
will add the caps as well -- I have a bunch of toroids ..

I will very much appreciate band modules that will plug into the ATS-3
- I am not going to worry about 160 - but would like 15/17.
And I am prepared to update the firmware - I have the 'fixings' - just
haven't tried it yet.

The RFSim looks very interesting - but I am more an 'assembler' than a
tech....

Thanks again

72 John VE3NK

--- In AT_Sprint@yahoogroups.com, Lutz Bergner <l.bergner@...> wrote:
>
> Hi John,
>
> my ATS3 was heavily modified before and has all features of the ATS3A
> without missing the wideband IF. So it would not make a big difference
> though I could not know the impact of the slightly different layout of
> both versions.
> Here's what you had to do except of all unsoldering - of course :
> - Go to Mike's W1MT webpage and get all things/hints you would need for
> loading a different firmware. It's very easy and works great. You may
> download my version as soon I managed to ask Steve for permission.
> - Get a 60MHz SMD 3.5V Crystaloszillator in 5 x 7 mm size. (e.g.
> Farnell) ,a 74AC02, NPO Chip- Cs and Toroids. Unsoldering of the old
> 40/50MHz Oszillator is not easy. I used two soldertips together - one in
> each hand.
> -Spurfilter:
> Remove C38,C39,C40 and replace them with new values.
> c38=47p
> c39=82p
> c40=47p + 6p8
> c41= C41 + 4p7
> c42= C42 + 2p2
> - Make some bandmodules for the new bands.....
> give me a week or so to make the artwork ready to publish. If you 'd
> prefer to build up an original ATS3 I could simulate ATS3-style
> bandmodules for you as well . This would be quickly done with RFSIM99

> (google for it - it's great!)and all the lessons I 've learned. My
> modules rather fit into ATS3A except the pin layout.
> - Load up the new firmware.
> - Have lots of fun..
>
> Anyway it worked for me . Cannot _garantee_ that it will work for others
> in all circumstances.
>
> 72s
>
> Lutz,DL2HRP
>
>
>
> Am Sonntag, den 07.01.2007, 21:58 +0000 schrieb aarhus_ca:
> > Congratulations, Lutz!
> >
> > AS I mentioned; I haven't yet built my second ATS-3 - so from this
> > posting; I take it I need to change to the 74AC02 and a 60 mhz
> > oscillator for the main board? I am just trying to collect the
> > appropriate parts before I start!
> >
>

729. Re: [AT_Sprint] AT Sprint 3A kit for sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-08 15:56:25 UTC
From: Joe Rocci
Topic: 727 Message: 729

John,

I think I'd like to buy it if it's still available. How much is it?

Joe
W3JDR

----- Original Message -----
From: John Burton
To: AT_Sprint@yahoogroups.com
Sent: Monday, January 08, 2007 10:37 AM
Subject: [AT_Sprint] AT Sprint 3A kit for sale

Greetings Group,
I would like to offer my unbuild ats3a kit to the group in case some one would like to buy one. I have a ways to go to be able to use this radio effective, since I am cw challenged. In the mean time I have decided to tackle Steve's Simple SSB rig listed on his web site and give another try at cw as time allows. So if anyone is interested it would probably be best to contact me at jab3739@... . The price would be the same as I paid Steve.
John
kg9dk

730. Re: [AT_Sprint] Re: new Bands for ATS3 - the second

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-08 16:24:12 UTC
From: John A. Evans - N0HJ
Topic: 708 Message: 730

Hi Lutz,

Thanks much for the info. I've got a built ATS-3 and an ATS-3A is on its way, so I have the option of doing either. I suspect if you are going to do artwork for the ATS-3A modules, then that is the route I will take - plus it keeps my ATS-3 working while the ATS-3A will be on the bench.

tnx es 72 - john - n0hj

Lutz Bergner wrote:
>
> Hi John,
>
>
> Here's what you had to do....
>

731. Re: new Bands for ATS3 - the second

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-08 16:58:39 UTC
From: aarhus_ca
Topic: 708 Message: 731

My situation is exactly the reverse :-)

John

--- In AT_Sprint@yahoogroups.com, "John A. Evans - N0HJ" <jaevans@...>
wrote:
>
> Hi Lutz,
>
> Thanks much for the info. I've got a built ATS-3 and an ATS-3A is on
> its way, so I have the option of doing either. I suspect if you are
> going to do artwork for the ATS-3A modules, then that is the route I
> will take - plus it keeps my ATS-3 working while the ATS-3A will be on
> the bench.
>
> tnx es 72 - john - n0hj
>
>
> Lutz Bergner wrote:
> >
> > Hi John,
> >
> >
> > Here's what you had to do....
> >
>

732. Hello

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-08 22:24:01 UTC
From: Richard Bennett
Topic: 732 Message: 732

Just joining the group. I have an ATS-3 built about 1 1/2 years ago. I haven't used it much, but I haven't done much ham radio over that time either. Anyway, looking forward to what I can learn or share here.

de kc0pet, Rick

733. Re: new Bands for ATS3 - the second

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-08 22:20:25 UTC
From: aeidenva
Topic: 708 Message: 733

Hi, Your work is very interesting but I hve a question about the SW fixes you have reimplemented. One SW fix handles an audio bump at the end of every character. I am using the ATS3 a lot for contesting and sometimes I have the rig hooked up to my computer and working in straight key mode. I assume the fix for this audio hump is included in your version.

Keep up the good work

Anders Eidenvall, SM5EFX

--- In AT_Sprint@yahoogroups.com, Lutz Bergner <l.bergner@...> wrote:
>
> Hi all,
>
> SNIP
>
> - Did merge in all fixes to the old version of Steves Firmware with the
> "altband" feature included. Now it is equivalent to the 02-20-06
> release. All my modifications are commented. Though it's not much :
> 9996KHz (RWM) calibration for EU, 60MHz refclock, additional bands
> enabled, swapped paddles (not included) .
> One little thing is still left to do - 17m puts out a "ATS-1" like 160m
> instead of "ATS-7". Steves permition provided I will put the commented
> source together with schemas and photos into my gallery.
>
>
> 72s
>
> Lutz, a happy DL2HRP
>

734. Re: [AT_Sprint] Hello

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-08 22:33:01 UTC
From: Terry WAØITP
Topic: 732 Message: 734

He Rick,
Welcome aboard
72 73
Terry, WAØITP
http://www.wa0dx.org/wa0itp
http://www.wa0dx.org
http://www.4sqrp.com/

----- Original Message -----
From: Richard Bennett
To: AT_Sprint@yahoogroups.com
Sent: Monday, January 08, 2007 4:24 PM
Subject: [AT_Sprint] Hello

Just joining the group. I have an ATS-3 built about 1 1/2 years ago. I
haven't used it much, but I haven't done much ham radio over that time
either. Anyway, looking forward to what I can learn or share here.

de kc0pet, Rick

No virus found in this incoming message.
Checked by AVG Free Edition.
Version: 7.5.432 / Virus Database: 268.16.7/619 - Release Date: 1/7/2007 6:29 PM

735. Re: [AT_Sprint] Re: new Bands for ATS3 - the second

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-09 07:42:32 UTC
From: Lutz Bergner
Topic: 708 Message: 735

Hi Anders,

Here's what I did exactly. I took the firmware version 27.MAR.06 from the W1MT webpage and made a "diff" against the version with the altband feature which is older. Then I manually merged in Steves fixes which I extracted with the diff command (on my Linux PC - diff is a Linux command to compare textfiles). I then changed the reference calibration to the frequency of RWM 9996KHz which is better for us Europeans and the bandmessage for 17m to "ATS-7". Thats all.
Steves straight key fix should already be included. One important thing. This version is not ATS3A aware but somebody who needs it could easily incorporate the altband feature into a recent ATS3A aware version.

72s

Lutz,DL2HRP

Am Montag, den 08.01.2007, 22:20 +0000 schrieb aeidenva:
> Hi, Your work is very interesting but I hve a question about the SW
> fixes you have reimplemented. One SW fix handles an audio bump at the
> end of every character. I am using the ATS3 a lot for contesting and
> sometimes I have the rig hooked up to my computer and working in
> straight key mode. I assume the fix for this audio hump is included in
> your version.
>
> Keep up the good work
>
> Anders Eidenvall, SM5EFX

736. Re: AT Sprint 3A kit for sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-09 12:34:23 UTC
From: John Burton
Topic: 727 Message: 736

The ATS3A kit has been sold.

--- In AT_Sprint@yahoogroups.com, "John Burton" <jab3739@...> wrote:
>
> Greetings Group,
> I would like to offer my unbuild ats3a kit to the group in case some
> one would like to buy one. I have a ways to go to be able to use
this
> radio effective, since I am cw challenged. In the mean time I have
> decided to tackle Steve's Simple SSB rig listed on his web site and
> give another try at cw as time allows. So if anyone is interested it
> would probably be best to contact me at jab3739@... . The
> price would be the same as I paid Steve.
> John
> kg9dk
>

737. Melting Solder ...

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-09 16:20:14 UTC
From: Jeff - JWID
Topic: 737 Message: 737

Well, after purchasing my ATS-3 in July of 2005 ... it looks like the big day has come.

Today looks to be the day that I start to melt solder!

I got a nice new temperature controlled solder station for Christmas, with a couple small tips, so I have no more excuses.

Hopefully all goes well and the next time you hear from me will be on the air!

73/72
Jeff - VA3JFF

738. Docking Station?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-09 17:19:24 UTC
From: Terry WAØITP
Topic: 738 Message: 738

Has anyone expanded upon Steve's suggestion of a building
some sort of a docking station out of the QBSA accessory
kit?

72 73
Terry, WA?ITP
http://www.wa0dx.org/wa0itp
http://www.wa0dx.org
http://www.4sqrp.com/

739. Re: [AT_Sprint] Docking Station?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-09 20:24:14 UTC
From: W2AGN
Topic: 738 Message: 739

Terry WAØITP wrote:

Has anyone expanded upon Steve's suggestion of a building
some sort of a docking station out of the QBSA accessory
kit?

72 73
Terry, WAØITP
http://www.wa0dx.org/wa0itp
http://www.wa0dx.org
http://www.4sqrp.com/

Well, I built mine with ATS-3A, docking station, NESCAF filter and T-match tuner into one enclosure. Actually, I made a custom panel 7" X 7.5 inches, to mount in a waterproof Pelican case, with storage remaining for phones, key, battery and even antenna. I wanted a waterproof enclosure to take on the boat. I will post pictures in a few days.

--

_ _ _ _ _
/ \ / \ / \ / \ / \ John L. Sielke
(W)(2)(A)(G)(N) http://w2agn.net
_/ _/ _/ _/ _/ http://www.blurty.com/users/w2agn

740. Photos of my ATS-3 and ATS-3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-09 21:12:49 UTC
From: Andrew C. MacAllister
Topic: 740 Message: 740

My first ATS-3 was finished in November, 2004. I have since built the ATS-3A, and went for lighter weight. Connectors have been removed, smaller and fewer Li-Po batteries were used, and the housing is primarily balsa wood. The key paddle is 1/32" plywood, but I had to have two earbuds. The new rig weighs in at 1.9 oz including earbuds, batteries and paddle. The two batteries are 200 maH units from batteriesamerica. They will last for the two-hour Spartan Sprint and run about 8V for 3W out. Check out my photos in the W5ACM folder.

72 de Andy W5ACM

741. Re: [AT_Sprint] Docking Station?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-09 20:54:08 UTC
From: W2AGN
Topic: 738 Message: 741

W2AGN wrote:
Terry WAØITP wrote:

Has anyone expanded upon Steve's suggestion of a building
some sort of a docking station out of the QBSA accessory
kit?

72 73
Terry, WAØITP
http://www.wa0dx.org/wa0itp
http://www.wa0dx.org
http://www.4sqrp.com/

Well, I built mine with ATS-3A, docking station, NESCAF filter
I meant with Base Station accessory, not "docking station." Sorry.

--

_ _ _ _ _
/ \ / \ / \ / \ / \ John L. Sielke
(W)(2)(A)(G)(N) http://w2agn.net
_/ _/ _/ _/ _/ http://www.blurty.com/users/w2agn

742. Re: [AT_Sprint] Docking Station?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-09 21:05:29 UTC
From: Terry WAØITP
Topic: 738 Message: 742

FB John,

Sounds very neat. Looking forward to seeing the pix.

72 73
Terry, WAØITP
http://www.wa0dx.org/wa0itp
http://www.wa0dx.org
http://www.4sqrp.com/

----- Original Message -----
From: W2AGN
To: AT_Sprint@yahoogroups.com
Sent: Tuesday, January 09, 2007 2:24 PM
Subject: Re: [AT_Sprint] Docking Station?

Terry WAØITP wrote:

Has anyone expanded upon Steve's suggestion of a building
some sort of a docking station out of the QBSA accessory
kit?

72 73
Terry, WAØITP
http://www.wa0dx.org/wa0itp
http://www.wa0dx.org
http://www.4sqrp.com/

Well, I built mine with ATS-3A, docking station, NESCAF filter and T-match tuner into one enclosure. Actually, I made a custom panel 7" X 7.5 inches, to mount in a waterproof Pelican case, with storage remaining for phones, key, battery and even antenna. I wanted a waterproof enclosure to take on the boat. I will post pictures in a few days.

--

_ _ _ _ _
/ \ / \ / \ / \ / \ John L. Sielke
(W)(2)(A)(G)(N) http://w2agn.net
_/ _/ _/ _/ _/ http://www.blurty.com/users/w2agn

No virus found in this incoming message.
Checked by AVG Free Edition.
Version: 7.5.432 / Virus Database: 268.16.7/620 - Release Date: 1/8/2007 4:12 PM

743. Re: [AT_Sprint] Photos of my ATS-3 and ATS-3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-09 21:57:12 UTC
From: Michael Harnage
Topic: 740 Message: 743

Andy,

I like you paddle design. Very nice usage of balsa.

-mike/w1mt

--- "Andrew C. MacAllister"
<andrew.macallister@...> wrote:

> The new rig weighs in at 1.9 oz
> including earbuds,
> batteries and paddle.

Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

744. RE: [AT_Sprint] Melting Solder ...

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-09 23:43:30 UTC
From: Richard Bennett
Topic: 737 Message: 744

Good luck, Jeff. I hope you have a good head mounted magnifier. Don't laugh, but I have one of those cheap Radio Shack "microscopes" and found it handy for checking some of the smaller pads.

SMT is not that hard and I found it to be kind of fun.

de kc0pet, Rick

----- Original Message -----
From: Jeff - JWID
To: AT_Sprint@yahoogroups.com
Sent: 01/09/2007 10:22:02 AM
Subject: [AT_Sprint] Melting Solder ...

Well, after purchasing my ATS-3 in July of 2005 ... it looks like the big day has come.

Today looks to be the day that I start to melt solder!

I got a nice new temperature controlled solder station for Christmas, with a couple small tips, so I have no more excuses.

Hopefully all goes well and the next time you hear from me will be on the air!

73/72
Jeff - VA3JFF

745. WTB: ATS-3A or 3

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-09 23:56:51 UTC
From: JT Croteau
Topic: 745 Message: 745

Payday is coming up and I'd like to buy an ATS to replace the -3 I never should have sold a few months ago. I would prefer a -3A but will consider a -3 or maybe even a -2. Already built is also preferred.

Thanks

--
JT Croteau, W6FO - Canton, GA

746. Re: [QRP-L] WTB: ATS-3A or 3

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-10 00:26:32 UTC
From: JT Croteau
Topic: 746 Message: 746

Didn't take long, I've found an ATS-3.

Thanks

--
JT Croteau, W6FO - Canton, GA

747. Altoid Alternate for ATS-3A?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-10 03:01:06 UTC
From: russellhulett
Topic: 747 Message: 747

I just received my ATS-3A kit. Have never been much of an altoids enthusiast although have used them sometimes. Like the LMB CR line of enclosures. However, the controls for the ATS are evidently tiny pushbuttons mounted onto the PCB, maybe the altoids tin is the only thing that will work.

Has anyone successfully installed the ATS-3A in a more conventional aluminum enclosure? Any suggestions or tips would be appreciated.

Curt, KB5JO

748. Re: Melting Solder ...

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-10 02:58:29 UTC
From: Jeff - JWID
Topic: 737 Message: 748

Thanks Rick,

So far ... so good. I've installed 10 ICs and and begun to pick up a
few tips and tricks of my own with regards to the rhythm and magic
involved in positioning and soldering the pins.

Now I should get a couple more hours tomorrow evening, and again
Thursday morning. That should get me off to a good start anyways.

73/72
Jeff - VA3JFF

--- In AT_Sprint@yahoogroups.com, "Richard Bennett" <kc0pet@...> wrote:
>
> Good luck, Jeff. I hope you have a good head mounted magnifier.
Don't laugh, but I have one of those cheap Radio Shack "microscopes"
and found it handy for checking some of the smaller pads.
>
> SMT is not that hard and I found it to be kind of fun.
>
> de kc0pet, Rick
>
>
> ----- Original Message -----
> From: Jeff - JWID
> To: AT_Sprint@yahoogroups.com
> Sent: 01/09/2007 10:22:02 AM
> Subject: [AT_Sprint] Melting Solder ...
>
>
> Well, after purchasing my ATS-3 in July of 2005 ... it looks like the
> big day has come.
>
> Today looks to be the day that I start to melt solder!
>
> I got a nice new temperature controlled solder station for Christmas,
> with a couple small tips, so I have no more excuses.
>
> Hopefully all goes well and the next time you hear from me will be on
> the air!
>
> 73/72
> Jeff - VA3JFF
>

749. Re: [AT_Sprint] Re: Melting Solder ...

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-10 03:11:26 UTC
From: asfco
Topic: 737 Message: 749

HI Jeff;

I will also be starting this project soon after my ATS-3A arrives which according to Steve will be shortly. After some email chats with Cash Olsen I have decided to use his SMD soldering technique. Please keep us posted on your progress, pass along any tips and good Luck
73/72
John W2GB

----- Original Message -----
From: Jeff - JWID
To: AT_Sprint@yahoogroups.com
Sent: Tuesday, January 09, 2007 9:58 PM
Subject: [AT_Sprint] Re: Melting Solder ...

Thanks Rick,

So far ... so good. I've installed 10 ICs and and begun to pick up a
few tips and tricks of my own with regards to the rhythm and magic
involved in positioning and soldering the pins.

Now I should get a couple more hours tomorrow evening, and again
Thursday morning. That should get me off to a good start anyways.

73/72
Jeff - VA3JFF

--- In AT_Sprint@yahoogroups.com, "Richard Bennett" <kc0pet@...> wrote:
>
> Good luck, Jeff. I hope you have a good head mounted magnifier.
Don't laugh, but I have one of those cheap Radio Shack "microscopes"
and found it handy for checking some of the smaller pads.
>
> SMT is not that hard and I found it to be kind of fun.
>
> de kc0pet, Rick
>
>
> ----- Original Message -----
> From: Jeff - JWID
> To: AT_Sprint@yahoogroups.com
> Sent: 01/09/2007 10:22:02 AM
> Subject: [AT_Sprint] Melting Solder ...
>
>
> Well, after purchasing my ATS-3 in July of 2005 ... it looks like the
> big day has come.

>
> Today looks to be the day that I start to melt solder!
>
> I got a nice new temperature controlled solder station for Christmas,
> with a couple small tips, so I have no more excuses.
>
> Hopefully all goes well and the next time you hear from me will be on
> the air!
>
> 73/72
> Jeff - VA3JFF
>

750. RE: [AT_Sprint] Altoid Alternate for ATS-3A?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-10 05:01:28 UTC
From: Richard Bennett
Topic: 747 Message: 750

I don't know why you couldn't. You could use panel mount push buttons on short leads on the front panel. You might still end up with the ant., paddle and phone jack on the sides. You should be able to put the power input wherever you want (mine is on a pigtail with powerpole connectors). It wouldn't be quite as compact as the 'toids tin, but would still be a mighty small radio.

Rick

----- Original Message -----
From: russellhulett
To: AT_Sprint@yahoogroups.com
Sent: 01/09/2007 9:02:06 PM
Subject: [AT_Sprint] Altoid Alternate for ATS-3A?

I just received my ATS-3A kit. Have never been much of an altoids enthusiast although have used them sometimes. Like the LMB CR line of enclosures. However, the controls for the ATS are evidently tiny pushbuttons mounted onto the PCB, maybe the altoids tin is the only thing that will work.

Has anyone successfully installed the ATS-3A in a more conventional aluminum enclosure? Any suggestions or tips would be appreciated.

Curt, KB5JO

751. Re: [AT_Sprint] Altoid Alternate for ATS-3A?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-10 12:25:16 UTC
From: Michael Harnage
Topic: 747 Message: 751

Those tactile switches in the 3A are the shortest
ones. Just get some longer and you can use almost
thickness sized box. If you've seen an ATS2 it uses
the same style switch just longer. Mouser carries them
(probably Digikey too) look under tactile switches.

-mike/w1mt

--- russellhulett <rhulett1@...> wrote:

> I just received my ATS-3A kit. Have never been much
> of an altoids
> enthusiast although have used them sometimes. Like
> the LMB CR line of
> enclosures. However, the controls for the ATS are
> evidently tiny
> pushbuttons mounted onto the PCB, maybe the altoids
> tin is the only
> thing that will work.
>
> Has anyone successfully installed the ATS-3A in a
> more conventional
> aluminum enclosure? Any suggestions or tips would
> be appreciated.
>

Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

752. Re: [AT_Sprint] Altoid Alternate for ATS-3A?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-10 14:06:57 UTC
From: mstangelo@comcast.net
Topic: 747 Message: 752

Curt,

I mounted my first ATS-3 in an Altoids. I'm building a second unit that will have a frequency readout as well as a tuner so I'm planning on mounting it in a Bud econobox:

<http://www.budind.com/view.php?part=ec-box>

I plan on building the board without the switches, power connector and phone jack and mount this components directly on the Bud box along with the frequency display and tuner switch and capacitor(s).

I like these Bud econoboses because they are rugged, lightweight and have rounded corners so they
can be thrown into a backpack with fear of ripping the fabric.

I haven't decided on the size of the box because I have to figure out how much real estate I'll need for
the controls.

73,

Mike N2MS

---------- Original message ----------
From: "russellhulett" <rhulett1@...>

> Has anyone successfully installed the ATS-3A in a more conventional
> aluminum enclosure? Any suggestions or tips would be appreciated.
>
> Curt, KB5JO
>

753. Re: [AT_Sprint] Altoid Alternate for ATS-3A?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-10 15:03:47 UTC
From: Alan Biocca
Topic: 747 Message: 753

There's always the billet machined altoids sized enclosure from American Morse:

http://www.americanmorse.com/aa1.htm

73,

-- Alan, wb6zqz

At 06:06 AM 1/10/2007, mstangelo@... wrote:
>Curt,
>
>I mounted my first ATS-3 in an Altoids. I'm building a second unit that
>will have a frequency readout as well as a tuner so I'm planning on
>mounting it in a Bud econobox:
>
><http://www.budind.com/view.php?part=ec-box>
>
>I plan on building the board without the switches, power connector and
>phone jack and mount this components directly on the Bud box along with
>the frequency display and tuner switch and capacitor(s).
>
>I like these Bud econoboses because they are rugged, lightweight and have
>rounded corners so they
>can be thrown into a backpack with fear of ripping the fabric.
>
>I haven't decided on the size of the box because I have to figure out how
>much real estate I'll need for
>the controls.
>
>73,
>
>Mike N2MS
>
>-------------- Original message --------------
>From: "russellhulett" <rhulett1@...>
>
>
> > Has anyone successfully installed the ATS-3A in a more conventional
> > aluminum enclosure? Any suggestions or tips would be appreciated.
> >
> > Curt, KB5JO

754. Morse Code change

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-11 02:07:57 UTC
From: fixnwrtr
Topic: 754 Message: 754

For those of you who graciously answered my questions about the FCC removal of the code element in license testing, you may see how the article turned out at: http://ppraa.org/zerobeat.php. You may download it at your convenience.

Thank you for answering my questions once again.

72/73 as always...

Jackie Cornwell
AC0CA

755. Wanted: Unbuilt ATS3/3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-11 02:19:26 UTC
From: Andy
Topic: 755 Message: 755

Does anybody have (or know of) an un built ATS3/3A that they would be willing to sell. From what I understand the kits are sold out with no immediate plans for more to be built. Thank you.

Regards,

Andrew Gulbrandsen
KE7AHJ

756. Re: Wanted: Unbuilt ATS3/3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-11 12:06:12 UTC
From: russellhulett
Topic: 755 Message: 756

I sent you an e-mail.

757. WTB: ATS-3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-11 14:22:32 UTC
From: Dana
Topic: 757 Message: 757

I see that the ATS-3a is now not longer being produced. I would like to get one, so if anyone has an extra kit they have decided not to build, please contact me offlist via my email.

Thanks.

Dana
AD5VC
SKCC #1555
FISTS #12296
FPQRP #1309

758. Re: [AT_Sprint] Altoid Alternate for ATS-3A?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-12 01:45:00 UTC
From: kr4ez@aol.com
Topic: 747 Message: 758

I put mine in a custom aluminum incloser. The aluminum is .025 inches thick and the button come threw just fine.

-----Original Message-----

From: "russellhulett" <rhulett1@...>
Subj: [AT_Sprint] Altoid Alternate for ATS-3A?
Date: Tue Jan 9, 2007 22:01
Size: 1K
To: AT_Sprint@yahoogroups.com

I just received my ATS-3A kit. Have never been much of an altoids enthusiast although have used them sometimes. Like the LMB CR line of enclosures. However, the controls for the ATS are evidently tiny pushbuttons mounted onto the PCB, maybe the altoids tin is the only thing that will work.

Has anyone successfully installed the ATS-3A in a more conventional aluminum enclosure? Any suggestions or tips would be appreciated.

Curt, KB5JO

Yahoo! Groups Links

759. 74HC02

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-12 14:39:08 UTC
From: W2AGN
Topic: 759 Message: 759

Well, I screwed up and got the 74HC02 in my ATS-3A in backwards! Removed it successfully, in that I didn't damage the board. I figured as long as I was at it, I would replace it with a 74AC02, in case I want to add the higher bands later on. Looking at the data sheets, this SHOULD be a straight replacement, right? I HATE surprises. Bad enough I can't find pin 1 on these newfangled little bugs any more....(grumble,grumble).

--

_ _ _ _ _
/ \ / \ / \ / \ / \ John L. Sielke
(W)(2)(A)(G)(N) http://w2agn.net
_/ _/ _/ _/ _/ http://www.blurty.com/users/w2agn

760. Re: [AT_Sprint] 74HC02

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-12 16:36:47 UTC
From: Lutz Bergner
Topic: 759 Message: 760

Hi John,

It is a straight replacement and works very well. I already use it for abt. 1 week. slightly more power on the upper bands and 17/15 you could not do without replacing it.
If you can read the characters on the surface of the chip , you should find a little point in the lower left corner. This is pin 1. It's a bit dependant on the manufacturer.

72s

Lutz, DL2HRP

Am Freitag, den 12.01.2007, 09:39 -0500 schrieb W2AGN:
> Well, I screwed up and got the 74HC02 in my ATS-3A in backwards!
> Removed it successfully, in that I didn't damage the board. I figured
> as long as I was at it, I would replace it with a 74AC02, in case I
> want to add the higher bands later on. Looking at the data sheets,
> this SHOULD be a straight replacement, right? I HATE surprises. Bad
> enough I can't find pin 1 on these newfangled little bugs any
> more....(grumble,grumble).
>
>
> --
> ---
> _ _ _ _ _
> / \ / \ / \ / \ / \ John L. Sielke
> (W)(2)(A)(G)(N) http://w2agn.net
> _/ _/ _/ _/ _/ http://www.blurty.com/users/w2agn
>
>
>
--
iXadmin

---
* Systemadministration
* Netzwerkberatung
* Internetdienstleistungen

Tel.: 034922 66717
Fax.: 034922 66718
mobil: 0175 2631032
VOIP(sipgate): 01801 6666260511
Mail: l.bergner@...

761. Re: [AT_Sprint] 74HC02

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-12 18:54:07 UTC
From: Mark Brueggemann
Topic: 759 Message: 761

--- W2AGN <w2agn@...> wrote:

> Bad enough Ican't find pin 1 on these newfangled little bugs
> anymore....(grumble,grumble).

Most SOIC's have a beveled top edge on the pin 1 side.

Mark K5LXP
Albuquerque, NM

762. New bands for ATS 3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-13 18:10:31 UTC
From: pipesanddrums17
Topic: 762 Message: 762

I have just recieved the 3A kit from Steve. I have read some postings on adding 17 & 15 meters.. Before I begin construction is there someplace where ALL the Mods necessary to do this are documented? OR is there something in the works from Steve where these mods might be forthcoming as a kit?
I really do not want to start this project and then have to tear it apart...I would rather do it once
Should I just go ahead NOW and repalce the 74HC02 with the 74AC02 as a start??
I am looking for some insight here.
Thanks
John W2GB

763. Re: [AT_Sprint] New bands for ATS 3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-13 21:56:26 UTC
From: Lutz Bergner
Topic: 762 Message: 763

Hi John,

tomorrow I think , will I have the time to do some documentation. Will supply data for a set of ATS3 and ATS3A style Bandmodules either based on RFSIM99 (google it) simulations. But these proved to be very precice for me in the past so you could rely on safely.
Generally - until now these mods have been done for my modified ATS3 only. It should not be a problem to do it for the '3A too but it has not been done yet.
According to these mods the following things had to be done:
- Merging in the "alternate band code" and 60MHz changes into a recent copy of Steves ATS3A firmware. The version I did use (contained in the files section of this group)is not ATS3A aware!
- Loading the new firmware.
- a 60MHz SMD oscillator 5x7mm 3,5V (e.g. from Farnell) instead of the 50MHz one.
- a 74AC02 for the PA- driver
- new values for C34 - C38 (spurfilter - will be documented soon).
- build up new bandmodules for 160m/17m/15m.
Will be going to load up all doc to the filesection of this group hopefully tomorrow. These modifications are not supported by Steve. It works great for me - but obviously can't give any garantees.
By the way - 160m is a great band at the moment and I have much fun there with my ATS3. But in your big country this could well be another story.

72s

Lutz, DL2HRP

Am Samstag, den 13.01.2007, 18:10 +0000 schrieb pipesanddrums17:
> I have just recieved the 3A kit from Steve. I have read some postings
> on adding 17 & 15 meters.. Before I begin construction is there
> someplace where ALL the Mods necessary to do this are documented? OR
> is there something in the works from Steve where these mods might be
> forthcoming as a kit?
> I really do not want to start this project and then have to tear it
> apart...I would rather do it once
> Should I just go ahead NOW and repalce the 74HC02 with the 74AC02 as
> a
> start??
> I am looking for some insight here.
> Thanks
> John W2GB
>
>

>
>
>
--
iXadmin

---
* Systemadministration
* Netzwerkberatung
* Internetdienstleistungen

Tel.: 034922 66717
Fax.: 034922 66718
mobil: 0175 2631032
VOIP(sipgate): 01801 6666260511
Mail: l.bergner@...

764. ATS-3A 7 Band Questions

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-13 19:47:10 UTC
From: W2AGN
Topic: 764 Message: 764

Installed the 74AC02 today, and the ATS-3A is working! Been thinking and I would REALLY like to have 15M for it. Since I already have the 74AC02 installed, and I have the cable on order to program the thing, so the questions that arise are:

1. Part # and source on the 60 Mhz oscillator?
2. Any chance of Steve or someone making the blank band filter boards available?

Thanks,

--

_ _ _ _ _
/ \ / \ / \ / \ / \ John L. Sielke
(W)(2)(A)(G)(N) http://w2agn.net
_/ _/ _/ _/ _/ http://www.blurty.com/users/w2agn

765. Re: [AT_Sprint] New bands for ATS 3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-13 23:05:09 UTC
From: w2agn
Topic: 762 Message: 765

```
* Lutz Bergner <l.bergner@...> wrote on 13/01/07 22:56 +0100:
> Hi John,
>
> tomorrow I think , will I have the time to do some documentation. Will
> supply data for a set of ATS3 and ATS3A style Bandmodules either based
> on RFSIM99 (google it) simulations. But these proved to be very precice
> for me in the past so you could rely on safely.
> Generally - until now these mods have been done for my modified ATS3
> only. It should not be a problem to do it for the '3A too but it has not
> been done yet.
> According to these mods the following things had to be done:
> - Merging in the "alternate band code" and 60MHz changes into a recent
> copy of Steves ATS3A firmware. The version I did use (contained in the
> files section of this group )is not ATS3A aware!
> - Loading the new firmware.
> - a 60MHz SMD oscillator 5x7mm 3,5V (e.g. from Farnell) instead of the
> 50MHz one.
> - a 74AC02 for the PA- driver
> - new values for C34 - C38 (spurfilter - will be documented soon).
> - build up new bandmodules for 160m/17m/15m.
> Will be going to load up all doc to the filesection of this group
> hopefully tomorrow. These modifications are not supported by Steve. It
> works great for me - but obviously can't give any garantees.
> By the way - 160m is a great band at the moment and I have much fun
> there with my ATS3. But in your big country this could well be another
> story.
>
> 72s
>
> Lutz, DL2HRP

Thanks, Lutz. Both John and I would be interested.

--
JOHN - W2AGN
```

766. Re: [AT_Sprint] ATS-3A 7 Band Questions

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-14 00:02:43 UTC
From: Steven Weber
Topic: 764 Message: 766

> 2. Any chance of Steve or someone making the blank band filter boards
>available?

NO, not me. Be advised I have NO spare filter boards and the cost of making some for the few who might want them would be absurd. Its not going to happen.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

767. Re: [AT_Sprint] New bands for ATS 3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-14 00:16:37 UTC
From: asfco
Topic: 762 Message: 767

Lutz;
I will be looking forward to seeing anything you have regarding this
Thanks

----- Original Message -----
From: Lutz Bergner
To: AT_Sprint@yahoogroups.com
Sent: Saturday, January 13, 2007 4:56 PM
Subject: Re: [AT_Sprint] New bands for ATS 3A

Hi John,

tomorrow I think , will I have the time to do some documentation. Will supply data for a set of ATS3 and ATS3A style Bandmodules either based on RFSIM99 (google it) simulations. But these proved to be very precice for me in the past so you could rely on safely.
Generally - until now these mods have been done for my modified ATS3 only. It should not be a problem to do it for the '3A too but it has not been done yet.
According to these mods the following things had to be done:
- Merging in the "alternate band code" and 60MHz changes into a recent copy of Steves ATS3A firmware. The version I did use (contained in the files section of this group)is not ATS3A aware!
- Loading the new firmware.
- a 60MHz SMD oscillator 5x7mm 3,5V (e.g. from Farnell) instead of the 50MHz one.
- a 74AC02 for the PA- driver
- new values for C34 - C38 (spurfilter - will be documented soon).
- build up new bandmodules for 160m/17m/15m.
Will be going to load up all doc to the filesection of this group hopefully tomorrow. These modifications are not supported by Steve. It works great for me - but obviously can't give any garantees.
By the way - 160m is a great band at the moment and I have much fun there with my ATS3. But in your big country this could well be another story.

72s

Lutz, DL2HRP

Am Samstag, den 13.01.2007, 18:10 +0000 schrieb pipesanddrums17:
> I have just recieved the 3A kit from Steve. I have read some postings
> on adding 17 & 15 meters.. Before I begin construction is there
> someplace where ALL the Mods necessary to do this are documented? OR
> is there something in the works from Steve where these mods might be
> forthcoming as a kit?

> I really do not want to start this project and then have to tear it
> apart...I would rather do it once
> Should I just go ahead NOW and repalce the 74HC02 with the 74AC02 as
> a
> start??
> I am looking for some insight here.
> Thanks
> John W2GB
>
>
>
>
>
--
iXadmin

---
* Systemadministration
* Netzwerkberatung
* Internetdienstleistungen

Tel.: 034922 66717
Fax.: 034922 66718
mobil: 0175 2631032
VOIP(sipgate): 01801 6666260511
Mail: l.bergner@...

768. Re: [AT_Sprint] New bands for ATS 3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-14 17:34:14 UTC
From: Karl Larsen
Topic: 762 Message: 768

Dear asfco and others,

I'm 71 years old and 6 feet 4 inches big and I put together an AT-Sprint 3 kit and with some serious trouble shooting Steve and I got it working, in a Altoids tin. I have checked into the SSB net I belong to with CW from this radio on 3.939 MHz. I was amazed how many guys copy code and heard my 2.5 Watts since I was in CO and they were in NM. I of course copied their SSB with no real problem. I put in 3.939 in CW and the radio shifted near the right frequency but not exactly. Steve and I talked about this and know why.

I understand the fun your having with trying to add 17 and 15 meters. But even for a bet I will not change a thing on MY ATS-3! It's a fine 4 band radio and a kit I built. It was so much more for the money it was really cheap. There are people paying more for 4 single frequency radios and putting them in one box.

You should all know that the 2 new pc boards for 17 and 15 Meters will be hard to get. Steve said as much today. So these new bands are a MAJOR change to the ATS-3 and require 2 more filter pc boards and a lot of components.

Good luck to all of you and I will not read any more about this modification since it isn't for me.

72 73 Karl K5DI

asfco wrote:
> Lutz;
> I will be looking forward to seeing anything you have regarding this
> Thanks
>
>
> ----- Original Message -----
> *From:* Lutz Bergner <mailto:l.bergner@...>
> *To:* AT_Sprint@yahoogroups.com <mailto:AT_Sprint@yahoogroups.com>
> *Sent:* Saturday, January 13, 2007 4:56 PM
> *Subject:* Re: [AT_Sprint] New bands for ATS 3A
>
> Hi John,
>
> tomorrow I think , will I have the time to do some documentation. Will
> supply data for a set of ATS3 and ATS3A style Bandmodules either based
> on RFSIM99 (google it) simulations. But these proved to be very
> precice
> for me in the past so you could rely on safely.

> Generally - until now these mods have been done for my modified ATS3
> only. It should not be a problem to do it for the '3A too but it
> has not
> been done yet.
> According to these mods the following things had to be done:
> - Merging in the "alternate band code" and 60MHz changes into a recent
> copy of Steves ATS3A firmware. The version I did use (contained in the
> files section of this group)is not ATS3A aware!
> - Loading the new firmware.
> - a 60MHz SMD oscillator 5x7mm 3,5V (e.g. from Farnell) instead of the
> 50MHz one.
> - a 74AC02 for the PA- driver
> - new values for C34 - C38 (spurfilter - will be documented soon).
> - build up new bandmodules for 160m/17m/15m.
> Will be going to load up all doc to the filesection of this group
> hopefully tomorrow. These modifications are not supported by Steve. It
> works great for me - but obviously can't give any garantees.
> By the way - 160m is a great band at the moment and I have much fun
> there with my ATS3. But in your big country this could well be another
> story.
>
> 72s
>
> Lutz, DL2HRP
>
> Am Samstag, den 13.01.2007, 18:10 +0000 schrieb pipesanddrums17:
> > I have just recieved the 3A kit from Steve. I have read some
> postings
> > on adding 17 & 15 meters.. Before I begin construction is there
> > someplace where ALL the Mods necessary to do this are
> documented? OR
> > is there something in the works from Steve where these mods
> might be
> > forthcoming as a kit?
> > I really do not want to start this project and then have to tear it
> > apart...I would rather do it once
> > Should I just go ahead NOW and repalce the 74HC02 with the 74AC02 as
> > a
> > start??
> > I am looking for some insight here.
> > Thanks
> > John W2GB
> >
> >
> >
> >
> >
> --
> iXadmin
>

> ---------------------------
> * Systemadministration
> * Netzwerkberatung
> * Internetdienstleistungen
> ---------------------------
>
> Tel.: 034922 66717
> Fax.: 034922 66718
> mobil: 0175 2631032
> VOIP(sipgate): 01801 6666260511
> Mail: l.bergner@... <mailto:l.bergner%40ixadmin.de>
>
>

769. Re: [AT_Sprint] New bands for ATS 3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-14 20:14:07 UTC
From: Lutz Bergner
Topic: 762 Message: 769

Hi all ,

This is my last posting regarding this matter. I do not want to bother someone. Just uploaded the PDF File with some BM- data for ATS3 and ATS3A. Will not be going to modify the firmware for ATS3A myself because I cannot test it. Please be warned , This is a MAJOR modification. I do have much fun with it and it works great for me but I simply wanted to share these things and nothing more.
I personally find it not too difficult to etch and drill bandmodules by myself . Next time I will make myself a new BM for 30m to have 3 sections of filtering and thus beeing able to use a better impedance match to the ne602. But this is only interesting for Europeans probably and will not be published here.

72s

Lutz DL2HRP

770. MS-15 Manual/Schematic

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-14 20:14:39 UTC
From: W2AGN
Topic: 770 Message: 770

I have one of KD1JV's MS-15 rigs but somehow in the years since I got it, I lost the manual. Anyone have one, or the schematic/parts values anyway? Soon 15 will be good again!

--

_ _ _ _ _
/ \ / \ / \ / \ / \ John L. Sielke
(W)(2)(A)(G)(N) http://w2agn.net
_/ _/ _/ _/ _/ http://www.blurty.com/users/w2agn

771. Re: [AT_Sprint] New bands for ATS 3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-14 20:29:11 UTC
From: Michael Harnage
Topic: 762 Message: 771

Lutz,

Please keep up the good work. I appreciate all the
work you have done and enjoy reading about it. One
day I will mod my ATS rigs for 15M and maybe even
higher with the right oscillator. I think pushing the
edges of technology is what ham'ming is all about and
it is what this list is all about.

If anyone wants to use my version of firmware to
support extra bands I will be happy to provide support
via private communications....

73 de w1mt
mike

--- Lutz Bergner <l.bergner@...> wrote:

> Hi all ,
>
> This is my last posting regarding this matter. I do
> not want to bother
> someone.

TV dinner still cooling?
Check out "Tonight's Picks" on Yahoo! TV.
http://tv.yahoo.com/

772. Re: [AT_Sprint] New bands for ATS 3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-14 20:43:43 UTC
From: W2AGN
Topic: 762 Message: 772

Lutz Bergner wrote:
> Hi all ,
>
> This is my last posting regarding this matter. I do not want to bother
> someone. Just uploaded the PDF File with some BM- data for ATS3 and
> ATS3A. Will not be going to modify the firmware for ATS3A myself
> because I cannot test it. Please be warned , This is a MAJOR
> modification. I do have much fun with it and it works great for me but I
> simply wanted to share these things and nothing more.
> I personally find it not too difficult to etch and drill bandmodules by
> myself . Next time I will make myself a new BM for 30m to have 3
> sections of filtering and thus beeing able to use a better impedance
> match to the ne602. But this is only interesting for Europeans probably
> and will not be published here.
>
> 72s
>
> Lutz DL2HRP
>
>
PLEASE, do not stop with the mod info. I thought that type of thing was the
whole purpose of this list. Don't let one old Luddite stop you from passing on
the info. I am seriously considering trying this. I wonder if someone has tried
the ATS-3A with stock 50 Mhz oscillator? Might be borderline, but better than
the 40 Mhz one in the straight ATS-3.

Anyway, keep us posted!

_ _ _ _ _
/ \ / \ / \ / \ / \ John L. Sielke
(W)(2)(A)(G)(N) http://w2agn.net
_/ _/ _/ _/ _/ http://www.blurty.com/users/w2agn

773. Re: [AT_Sprint] New bands for ATS 3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-14 23:20:57 UTC
From: John A. Evans - N0HJ
Topic: 762 Message: 773

Hi Lutz,

If you would like an ATS-3a to experiment with, I would gladly send
you my unbuilt kit to use as a guinea pig. I know this is probably a
sneaky way to get an ATS-3a built with 3 extra bands, but I also see it
as a way to provide resources so the experts can provide modification
info to other builder/owners. What are your thoughts?

72 - john - n0hj

Lutz Bergner wrote:
>
> Hi all ,
>
> This is my last posting regarding this matter.
>

774. Re: [AT_Sprint] New bands for ATS 3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-15 04:09:23 UTC
From: w9ya@qrparci.net
Topic: 762 Message: 774

Hey Lutz;

I think I can safely speak for everyone here; please do not let one person's remarks prevent you from speaking out on such wonderful things as you have given this group.

As far as I am concerned, I welcome EVERYTHING you care to post to this group.

i.e. PLEASE continue your posting.

AND thank you very much for all you have given us so far.

Vy 72;

Bob
w9ya

> Hi all ,
>
> This is my last posting regarding this matter. I do not want to bother
> someone. Just uploaded the PDF File with some BM- data for ATS3 and
> ATS3A. Will not be going to modify the firmware for ATS3A myself
> because I cannot test it. Please be warned , This is a MAJOR
> modification. I do have much fun with it and it works great for me but I
> simply wanted to share these things and nothing more.
> I personally find it not too difficult to etch and drill bandmodules by
> myself . Next time I will make myself a new BM for 30m to have 3
> sections of filtering and thus beeing able to use a better impedance
> match to the ne602. But this is only interesting for Europeans probably
> and will not be published here.
>
> 72s
>
> Lutz DL2HRP
>
>

775. Re: [AT_Sprint] New bands for ATS 3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-15 08:25:30 UTC
From: Lutz Bergner
Topic: 762 Message: 775

Great idea John,
especially for those who hesitate to unsolder the 40/50MHz oscillator.
Its so tricky...
18MHz has the same ratio to 50MHz as 14MHz has to 40MHz. It is bleeding
edge indeed but should be possible. 15m is considered not serious with
50MHz and should be avoided.
As it may be so interesting for some - here comes a new spurfilter for
ATS3A - 50MHz refclock. It should permit 160m and 17m then.
C34=47p, C36=82p, C38=39p, C35=8p + 6p8, C37=8p + 8p2
It has a deep notch near the worst spur: 31928KHz. The AD spurcalculator
is invaluable indeed.

> the ATS-3A with stock 50 Mhz oscillator? Might be borderline, but
> better than
> the 40 Mhz one in the straight ATS-3.
>
>

> Anyway, keep us posted!
>
I will do ;-)
Thank you all so much.

72s

Lutz

776. Re: New bands for ATS 3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-15 11:42:03 UTC
From: phm7744
Topic: 762 Message: 776

--- In AT_Sprint@yahoogroups.com, Lutz Bergner <l.bergner@...> wrote:
> As it may be so interesting for some - here comes a new spurfilter
for
> ATS3A - 50MHz refclock. It should permit 160m and 17m then.
> C34=47p, C36=82p, C38=39p, C35=8p + 6p8, C37=8p + 8p2
> It has a deep notch near the worst spur: 31928KHz. The AD
spurcalculator is invaluable indeed.
>
Hi Lutz,

Here you mention spurfilters. Is this common practice for DDS VFO rig developers to add a number of spur filters and why some DDS rigs may have many more noticable noises than others especially under poor band conditions?

Pete WK8S

777. Re: [AT_Sprint] Re: New bands for ATS 3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-15 12:23:37 UTC
From: Lutz Bergner
Topic: 762 Message: 777

Hi Pete

this is more a matter of a good design of supply voltages and grounding
layout. You will find a very carefull design at the ATS devices giving
VERY few noticable spurs. Normally each DDS vfo needs one spurfilter
especially to keep away images and combinations of reference- with
desired frequency.
it should pass all wanted frequencies and is mostly a low pass. In the
original design it passes frq. upto 15MHz. This would be too low for 17m
TX signal. Thats why I did supply a new one which has a deep notch at
the first unwanted frq. 31280KHz.

72s

Lutz, DL2HRP

Am Montag, den 15.01.2007, 11:42 +0000 schrieb phm7744:

> Here you mention spurfilters. Is this common practice for DDS VFO rig
> developers to add a number of spur filters and why some DDS rigs may
> have many more noticable noises than others especially under poor
> band
> conditions?
>
> Pete WK8S
>
>
>
>
>
--
iXadmin

---
* Systemadministration
* Netzwerkberatung
* Internetdienstleistungen

Tel.: 034922 66717
Fax.: 034922 66718
mobil: 0175 2631032
VOIP(sipgate): 01801 6666260511
Mail: l.bergner@...

778. Re: [AT_Sprint] MS-15 Manual/Schematic

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-15 04:12:34 UTC
From: w9ya@qrparci.net
Topic: 770 Message: 778

> I have one of KD1JV's MS-15 rigs but somehow in the years since I got
> it, I lost the manual. Anyone have one, or the schematic/parts values
> anyway? Soon 15 will be good again!
> --
> ---
> _ _ _ _ _
> / \ / \ / \ / \ / \ John L. Sielke
> (W)(2)(A)(G)(N) http://w2agn.net
> _/ _/ _/ _/ _/ http://www.blurty.com/users/w2agn

I just may be able to send you something...BUT...you will;

1 - have to remind me again thursday and NOT before then.

2 - Then I will have to dig it out.

Vy 72 OM;

Bob
w9ya

779. Re: MS-15 Manual/Schematic & ATS Progress

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-15 17:09:43 UTC
From: steve_n0tu
Topic: 770 Message: 779

Anyone have one, or the schematic/parts values
> > anyway? Soon 15 will be good again!

John, I've also got a MS15 and manual that's gathering dust thinking
of selling/trading off. Before I do let me know if you need a copy?
Steven0tu

and Lutz - Standing applause for the work you've done on ATS and
shared here!!!

Thank you my friend!! Very much appreciated! Steven0tu

780. Who said Stop?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-15 20:05:49 UTC
From: Karl Larsen
Topic: 780 Message: 780

I wrote saying that I'm too old to be changing MY ATS-3 but NOWHERE
did I ask anyone to stop sending anything to this list. I have read and
re-read what I wrote.

So let me say again the same thing. Please send anything you want
to. I can't stop anyone anyway. I said I will not read what folks have
to say about 50 MHz clocks and new software and new filter boards. But
by all means keep working on these and don't worry about me. I might
read a few just to learn what's going on.

72 73 Karl K5DI

781. ATS-3 Computer Control Interface

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-15 21:18:02 UTC
From: Joe Rocci
Topic: 781 Message: 781

I've been noodling with the idea of a small board that would plug into the ATS-3's programming header and take control of the rig. It would do this by holding the ATS-3's microcontroller in reset, thus releasing it from the internal I/O bus and allowing another controller to drive the bus. The proposed interface board would have another microcontroller and a USB interface. The USB interface would provide 5V to the ATS-3 which would power everything except the transmitter. If I can figure out how to also implement a step-up switching regulator on the interface board without drowning the receiver in noise, then the USB port can probably also power the transmitter, at least to a watt or so. The interface controller would be programmed to communicate with a laptop or other PC via a virtual COM port driver in the PC looking like, say, COM1 to the PC. The controller would have a very simple application that would allow the PC to send high-level commands to the ATS-3 such as various frequency control mechanisms, mute, and TX enable.

If this works out, I'd have a nice USB-powered, software-controlled 'brick' that I could take out on my RV outings. With appropriate PC software, it should be possible to send/receive CW morse and a simple 'fuzzy' digital mode such as Hellschreiber from the PC interface.

Is there any wider interest in such a project?

Joe
W3JDR

782. Re: ATS-3 Computer Control Interface

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-16 14:56:35 UTC
From: Bruce Beford
Topic: 781 Message: 782

Hmm.... Trying to think what I would get out of this, ecept requiring a PC to run the radio...

I suppose you could easily add memories that way. And a nice GUI with on-screen 'knobs' for RIT, etc.

For sheer efficiency, however- you can't beat the basic rig, with a set of paddles for freq entry, and the wetware between your ears for Morse decoding.

In any event, keep us posted as your musings evolve!

-Bruce N1RX

--- In AT_Sprint@yahoogroups.com, "Joe Rocci" <joe@...> wrote:
>
> I've been noodling with the idea of a small board that would plug
>into the ATS-3's programming header and take control of the rig.

> .snip. <

> If this works out, I'd have a nice USB-powered, software-
> controlled 'brick' that I could take out on my RV outings. With
> appropriate PC software, it should be possible to send/receive CW
> morse and a simple 'fuzzy' digital mode such as Hellschreiber from
> the PC interface.
>
> Is there any wider interest in such a project?
>
> Joe
> W3JDR
>

783. Re: [AT_Sprint] Re: ATS-3 Computer Control Interface

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-16 16:01:22 UTC
From: Joe Rocci
Topic: 781 Message: 783

Thanks Bruce,

Since my intended application is mobility, not backpacking, my goals are a little different. I keep a compact laptop in my RV. That, together with this little Altoids 'brick' which would get its power from the laptop battery, would be very nice for me to set up on a table or even inside the RV, with no need for an external battery pack. And since the laptop's battery is pretty substantial and get's recharged as soon as I put it back in the RV, it's convenient for me. Also, as you pointed out, the sky's the limit when you get into software features and that appeals to me as I love to develop GUIs and applications such as this.

Once I get the ATS kit up and running, I'll probably begin development of the plug-in interface board. If anyone has suggestions for value-adds, I'd appreciate it.

Joe
W3JDR

----- Original Message -----
From: Bruce Beford
To: AT_Sprint@yahoogroups.com
Sent: Tuesday, January 16, 2007 9:56 AM
Subject: [AT_Sprint] Re: ATS-3 Computer Control Interface

Hmm.... Trying to think what I would get out of this, ecept requiring a PC to run the radio...

I suppose you could easily add memories that way. And a nice GUI with on-screen 'knobs' for RIT, etc.

For sheer efficiency, however- you can't beat the basic rig, with a set of paddles for freq entry, and the wetware between your ears for Morse decoding.

In any event, keep us posted as your musings evolve!

-Bruce N1RX

--- In AT_Sprint@yahoogroups.com, "Joe Rocci" <joe@...> wrote:
>
> I've been noodling with the idea of a small board that would plug
>into the ATS-3's programming header and take control of the rig.

> .snip. <

> If this works out, I'd have a nice USB-powered, software-
> controlled 'brick' that I could take out on my RV outings. With
> appropriate PC software, it should be possible to send/receive CW
> morse and a simple 'fuzzy' digital mode such as Hellschreiber from

> the PC interface.
>
> Is there any wider interest in such a project?
>
> Joe
> W3JDR
>

784. Re: [AT_Sprint] Re: ATS-3 Computer Control Interface

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-16 16:25:48 UTC
From: BPCI@aol.com
Topic: 781 Message: 784

In a message dated 1/16/2007 9:11:04 AM Mountain Standard Time,
joe@... writes:

Once I get the ATS kit up and running, I'll probably begin development of
the plug-in interface board. If anyone has suggestions for value-adds, I'd
appreciate it.

I, for one, will look forward to the results of your work...73, Ci

Ci Jones, WU7R
FISTS #10789, CC #1853
NAQCC #306
ARCI #12163
SKCC #22, C#38
FP #1442

785. Re: [AT_Sprint] Re: ATS-3 Computer Control Interface

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-16 17:02:01 UTC
From: Terry WAØITP
Topic: 781 Message: 785

I love the little rig the way it is, but your idea looks like a very logical progression of development. I'll certainly follow your work with interest..

I wonder if Steve hadn't anticipated the many owner enhancements of his creation. The activity speaks very well of the value his original designs.

72 73
Terry, WA?ITP
http://www.wa0dx.org/wa0itp
http://www.wa0dx.org
http://www.4sqrp.com/

----- Original Message -----
From: Joe Rocci
To: AT_Sprint@yahoogroups.com
Sent: Tuesday, January 16, 2007 10:01 AM
Subject: Re: [AT_Sprint] Re: ATS-3 Computer Control Interface

Thanks Bruce,

Since my intended application is mobility, not backpacking, my goals are a little different. I keep a compact laptop in my RV. That, together with this little Altoids 'brick' which would get its power from the laptop battery, would be very nice for me to set up on a table or even inside the RV, with no need for an external battery pack. And since the laptop's battery is pretty substantial and get's recharged as soon as I put it back in the RV, it's convenient for me. Also, as you pointed out, the sky's the limit when you get into software features and that appeals to me as I love to develop GUIs and applications such as this.

Once I get the ATS kit up and running, I'll probably begin development of the plug-in interface board. If anyone has suggestions for value-adds, I'd appreciate it.

Joe
W3JDR

----- Original Message -----
From: Bruce Beford
To: AT_Sprint@yahoogroups.com
Sent: Tuesday, January 16, 2007 9:56 AM
Subject: [AT_Sprint] Re: ATS-3 Computer Control Interface

Hmm.... Trying to think what I would get out of this, ecept
requiring
a PC to run the radio...

I suppose you could easily add memories that way. And a nice
GUI with
on-screen 'knobs' for RIT, etc.

For sheer efficiency, however- you can't beat the basic rig,
with a
set of paddles for freq entry, and the wetware between your
ears for
Morse decoding.

In any event, keep us posted as your musings evolve!

-Bruce N1RX

--- In AT_Sprint@yahoogroups.com, "Joe Rocci" <joe@...>
wrote:
>
> I've been noodling with the idea of a small board that
> would plug
>into the ATS-3's programming header and take control of the
>rig.

> .snip. <

> If this works out, I'd have a nice USB-powered, software-
> controlled 'brick' that I could take out on my RV outings.
> With
> appropriate PC software, it should be possible to
> send/receive CW
> morse and a simple 'fuzzy' digital mode such as
> Hellschreiber from
> the PC interface.
>
> Is there any wider interest in such a project?
>
> Joe
> W3JDR
>

No virus found in this incoming message.
Checked by AVG Free Edition.
Version: 7.5.432 / Virus Database: 268.16.12/630 - Release
Date: 1/15/2007 8:28 PM

786. Re: [AT_Sprint] Re: ATS-3 Computer Control Interface

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-16 19:25:13 UTC
From: Steven Weber
Topic: 781 Message: 786

Interesting idea. Almost all the connections you need come out the programming port. The only one which doesn't is the Tx keying pin. I suppose that could be rewired to where pin 1 of the MPU goes now. Pin 1 is only needed for reprogramming the chip. Oh and side tone, but I guess the PC or what ever could generate that, but it wouldn't be routed through the headphones.

Good luck, I wish I could write programs which can run on a PC. Maybe some day I'll learn.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

787. Re: [AT_Sprint] Re: ATS-3 Computer Control Interface

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-16 21:04:26 UTC
From: Joe Rocci
Topic: 781 Message: 787

Steve,

For Tx control. I was going to play a trick with the MPU's TEST input. As far as I can determine, this input is used for programming, and the major thing you have to be concerned about if you drive it for something else is that you might inadvertantly blow the programming fuse in the MPU. However, it takes several (5-7) volts and upwards of 100 ma to blow the fuse. Since the input looks otherwise like a 60K resistor inside the chip, I was planning to cut the line between the TEST input on the MPU and the TEST pin on the connector and insert a 10K resistor in series. Then I was going to connect the TEST pin on the connector to the TX enable line. This mod would allow the interface card to drive Tx enable without damaging the internal fuse. When the programmer is plugged into the connector, all should work as usual. It's only a theory at this point..Comments?

Joe

----- Original Message -----
From: Steven Weber
To: AT_Sprint@yahoogroups.com
Sent: Tuesday, January 16, 2007 2:25 PM
Subject: Re: [AT_Sprint] Re: ATS-3 Computer Control Interface

Interesting idea. Almost all the connections you need come out the programming port. The only one which doesn't is the Tx keying pin. I suppose that could be rewired to where pin 1 of the MPU goes now. Pin 1 is only needed for reprogramming the chip. Oh and side tone, but I guess the PC or what ever could generate that, but it wouldn't be routed through the headphones.

Good luck, I wish I could write programs which can run on a PC. Maybe some day I'll learn.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

788. Re: [AT_Sprint] Re: ATS-3 Computer Control Interface

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-17 03:25:00 UTC
From: kr4ez@aol.com
Topic: 781 Message: 788

judging from what i have seen so far i think you can do anything you put your mind to steve! i can not wait to see what ou come up with next.

-----Original Message-----

From: Steven Weber <kd1jv@...>
Subj: Re: [AT_Sprint] Re: ATS-3 Computer Control Interface
Date: Tue Jan 16, 2007 14:25
Size: 1K
To: AT_Sprint@yahoogroups.com

Interesting idea. Almost all the connections you need come out the programming port. The only one which doesn't is the Tx keying pin. I suppose that could be rewired to where pin 1 of the MPU goes now. Pin 1 is only needed for reprogramming the chip. Oh and side tone, but I guess the PC or what ever could generate that, but it wouldn't be routed through the headphones.

Good luck, I wish I could write programs which can run on a PC. Maybe some day I'll learn.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

Yahoo! Groups Links

789. Re: ATS-3 Computer Control Interface

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-17 21:10:17 UTC
From: Mike Schettler
Topic: 781 Message: 789

Joe,
I have been thinking about something a little different. The ATS-3 & -3A are essentially software defined radios. How about an approach that gives operators a 'user-friendly' software interface to take advantage of the potential for a 7-band radio? Of course, this assumes you have made the 60 MHz clock osc change and the related mods to permit the additional bands, and have the extra plug-in boards you need.

Before an operating session, you would launch a file on your computer to re-program the radio for your immediate preferences. The computer would display a list of menu options such as:
- Which 4 bands to use from the 7 bands available (160m - 15m)
- Specific frequency that the rig wakes up on at power-on for each band (maybe on 40m you prefer 7030 instead of 7040)
- Tuning step size (50 Hz, 100 Hz, etc)
- Code speed for audio prompts (Rx frequency, etc)
Once you have your preferences entered, the computer updates the firmware and you're ready to go.

Any variable that is stored in the MPU firmware could be changed to suit individual user preferences. Of course this all could be used on a stock rig, just minus the extra bands.

I did W1MT's firmware update on my ATS-3, and know that the update process is relatively quick.

Mike WA6MER

>
> For Tx control. I was going to play a trick with the MPU's TEST input. As far as I can determine, this input is used for programming, and the major thing you have to be concerned about if you drive it for something else is that you might inadvertantly blow the programming fuse in the MPU. However, it takes several (5-7) volts and upwards of 100 ma to blow the fuse. Since the input looks otherwise like a 60K resistor inside the chip, I was planning to cut the line between the TEST input on the MPU and the TEST pin on the connector and insert a 10K resistor in series. Then I was going to connect the TEST pin on the connector to the TX enable line. This mod would allow the interface card to drive Tx enable without damaging the internal fuse. When the programmer is plugged into the connector, all should work as usual. It's only a theory at this point..Comments?
>
> Joe

790. Re: [AT_Sprint] Re: ATS-3 Computer Control Interface

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-17 21:33:33 UTC
From: Joe Rocci
Topic: 781 Message: 790

Hi Mike!

Your idea is interesting, but I disagree that the ATS3s are 'software-defined radios' (SDR). They're 'software (more accurately 'firmware') controlled radios' but that's a far cry from SDR. SDR does all the IF filtering, demodulation, and other processing in software, eliminating the need for complex and fixed hardware. With SDR, there are no crystal filters, BFO's, product detectors, and most of the other blocks you'd find in a receiver IF. It's all done with digital signal processing.

Some of the other features you mentioned don't need an external computer. With a minor firmware mod, the existing ATS3 could possibly remember the last frequency it was operated on for each band, so as soon as you plug in a band module, it would automatically tune to that frequency. Same goes for tuning step and code speed. I'd have to look and see if there's enough non-volatile memory available for this though. Steve or Mike could probably tell us off the top of their heads. Even if more memory is required, it might be done with a drop-in upgrade to one of the higher-end parts in the existing microcontroller family, or even with an external serial-loaded flash memory. The memory upgrade could easily be done with a small board that plugs into the programming header, and some simple firmware mods to the ATS firmware.

All this is cool and someone should do it. In fact, someone probably will do it now that you've suggested it. However it doesn't meet my needs for a teeny radio that's powered from my laptop's USB port, and which I can control from the laptop.

----- Original Message -----
From: Mike Schettler
To: AT_Sprint@yahoogroups.com
Sent: Wednesday, January 17, 2007 4:10 PM
Subject: [AT_Sprint] Re: ATS-3 Computer Control Interface

Joe,
I have been thinking about something a little different. The ATS-3 & -3A are essentially software defined radios. How about an approach that gives operators a 'user-friendly' software interface to take advantage of the potential for a 7-band radio? Of course, this assumes you have made the 60 MHz clock osc change and the related mods to permit the additional bands, and have the extra plug-in boards you need.

Before an operating session, you would launch a file on your computer to re-program the radio for your immediate preferences. The computer would display a list of menu options such as:
- Which 4 bands to use from the 7 bands available (160m - 15m)
- Specific frequency that the rig wakes up on at power-on for each band (maybe on 40m you prefer 7030 instead of 7040)
- Tuning step size (50 Hz, 100 Hz, etc)
- Code speed for audio prompts (Rx frequency, etc)

Once you have your preferences entered, the computer updates the firmware and you're ready to go.

Any variable that is stored in the MPU firmware could be changed to suit individual user preferences. Of course this all could be used on a stock rig, just minus the extra bands.

I did W1MT's firmware update on my ATS-3, and know that the update process is relatively quick.

Mike WA6MER

>
> For Tx control. I was going to play a trick with the MPU's TEST input. As far as I can determine, this input is used for programming, and the major thing you have to be concerned about if you drive it for something else is that you might inadvertantly blow the programming fuse in the MPU. However, it takes several (5-7) volts and upwards of 100 ma to blow the fuse. Since the input looks otherwise like a 60K resistor inside the chip, I was planning to cut the line between the TEST input on the MPU and the TEST pin on the connector and insert a 10K resistor in series. Then I was going to connect the TEST pin on the connector to the TX enable line. This mod would allow the interface card to drive Tx enable without damaging the internal fuse. When the programmer is plugged into the connector, all should work as usual. It's only a theory at this point..Comments?
>
> Joe

791. Re: [AT_Sprint] Re: ATS-3 Computer Control Interface

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-17 21:58:53 UTC
From: Michael Harnage
Topic: 781 Message: 791

In my version the flash is full. In fact, for the last mod I made I had to steal keyer memory to be able to store the menu/band info structures in flash. (This version is not released because it really does not add any new functionality to the rigs. It freed up some program space, 600+ bytes, for the future. Maybe one day I will come up with something worthy for a new release but for now I am pretty content with how the rig works. I am percolating on the multiple band stuff - perhaps can come up with some thing in that arena.)

The thing about having the rig "remember" the last freqs used is that your brain now has to remember too. It was a deliberate decision to always come up on standard freqs. That being said there is nothing stopping anyone from customizing their rig to their hearts content. :)

The flash is already there for the tuning steps, just add code to allow changing it.

Lots of neat ideas floating on the list lately. Glad to see the interest!

-mike/w1mt

--- Joe Rocci <joe@...> wrote:

>
> Some of the other features you mentioned don't need
> an external computer. With a minor firmware mod, the
> existing ATS3 could possibly remember the last
> frequency it was operated on for each band, so as
> soon as you plug in a band module, it would
> automatically tune to that frequency. Same goes for
> tuning step and code speed. I'd have to look and see
> if there's enough non-volatile memory available for
> this though. Steve or Mike could probably tell us
> off the top of their heads.

_____
Be a PS3 game guru.
Get your game face on with the latest PS3 news and
previews at Yahoo! Games.
http://videogames.yahoo.com/platform?platform=120121

The fish are biting.
Get more visitors on your site using Yahoo! Search Marketing.
http://searchmarketing.yahoo.com/arp/sponsoredsearch_v2.php

792. ATS-3 to Laptop

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-18 01:17:30 UTC
From: Tim Keene
Topic: 792 Message: 792

For me, I would not need to key the rig with the computer. I tend to be old fashion and think that one should send code with the traditional devices, - straight key, bug or paddles. I always thought sending (or receiving)morse with a keyboard/computer was not really code.
Of course, a Tx line would have to be installed in order to put the rig in the tune-up mode for tuning the antenna tuner.
I would most certainly use the laptop with the ATS-3. Really cool Idea.
That's my 2 cents worth
Tim - K5DEZ

793. Re: [AT_Sprint] ATS-3 to Laptop

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-18 01:48:14 UTC
From: Joe Rocci
Topic: 792 Message: 793

I agree with you Tom. My latest approach to this preserves all the functionality of the existing microcontroller while the interface is plugged in. I think with some simple ATS firmware mods, the microcontroller can know when the interface is plugged in and behave compatibly with it so that the computer just adds value instead of eliminating features. I bought a TI development tool today (only $20) and downloaded the firmware development environment. Looks like a very clean, simple, and understandable instruction set. I'm annxious to get started.

Joe
W3JDR

----- Original Message -----
From: Tim Keene
To: AT_Sprint@yahoogroups.com
Sent: Wednesday, January 17, 2007 8:17 PM
Subject: [AT_Sprint] ATS-3 to Laptop

For me, I would not need to key the rig with the computer. I tend to be old fashion and think that one should send code with the traditional devices, - straight key, bug or paddles. I always thought sending (or receiving)morse with a keyboard/computer was not really code.
Of course, a Tx line would have to be installed in order to put the rig in the tune-up mode for tuning the antenna tuner.
I would most certainly use the laptop with the ATS-3. Really cool Idea.
That's my 2 cents worth
Tim - K5DEZ

794. Re: [qrp-l.org] New Rig dubbed "Kitchen Sink"

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-18 20:39:50 UTC
From: John A. Evans - N0HJ
Topic: 794 Message: 794

Actually, the link should be as below. However, I saw no pictures referenced on the page.

72 - john - n0hj

>
> http://w2agn.net/Kitchensink.html
>
>

795. New Rig dubbed "Kitchen Sink"

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-18 20:32:45 UTC
From: W2AGN
Topic: 795 Message: 795

Finished my project, building the ATS-3A and BSA into a waterproof enclosure to use on the boat. All is working FB. XYL dubbed it the "Kitchensink" since it has everything except ....

http://w2agn.net/kitchensink.html

--

_ _ _ _ _
/ \ / \ / \ / \ / \ John L. Sielke
(W)(2)(A)(G)(N) http://w2agn.net
_/ _/ _/ _/ _/ http://www.blurty.com/users/w2agn

796. Re: [qrp-l.org] New Rig dubbed "Kitchen Sink"

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-18 21:39:35 UTC
From: W2AGN
Topic: 794 Message: 796

John A. Evans - N0HJ wrote:
> Actually, the link should be as below. However, I saw no pictures
> referenced on the page.
>
> 72 - john - n0hj
>
>>
>
>
>
RATS! I fixed it now. It is http://w2agn.net/kitchensink.html (small
"k" as I wanted). The pictures should be OK now. Sorry 'bout that.

--
_ _ _ _ _
/ \ / \ / \ / \ / \ John L. Sielke
(W)(2)(A)(G)(N) http://w2agn.net
_/ _/ _/ _/ _/ http://www.blurty.com/users/w2agn

797. RE: [AT_Sprint] New Rig dubbed "Kitchen Sink"

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-18 23:32:42 UTC
From: Rob May
Topic: 795 Message: 797

Very clever packaging there John. Nice job.
Rob
NV5E

>From: W2AGN <w2agn@...>
>Reply-To: AT_Sprint@yahoogroups.com
>To: qrp-l@..., AT_Sprint@yahoogroups.com
>Subject: [AT_Sprint] New Rig dubbed "Kitchen Sink"
>Date: Thu, 18 Jan 2007 15:32:45 -0500
>
>Finished my project, building the ATS-3A and BSA into a waterproof
>enclosure to use on the boat. All is working FB. XYL dubbed it the
>"Kitchensink" since it has everything except ....
>
>http://w2agn.net/kitchensink.html
>
>--
> _ _ _ _ _
> / \ / \ / \ / \ / \ John L. Sielke
>(W)(2)(A)(G)(N) http://w2agn.net
> _/ _/ _/ _/ _/ http://www.blurty.com/users/w2agn
>
>

_____
The MSN Entertainment Guide to Golden Globes is here. Get all the scoop.
http://tv.msn.com/tv/globes2007/?icid=nctagline2

798. Re: New Rig dubbed "Kitchen Sink"

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-19 16:56:48 UTC
From: fixnwrtr
Topic: 795 Message: 798

John,

How big is it and how much does it weigh?

Jackie Cornwell
AC0CA

--- In AT_Sprint@yahoogroups.com, W2AGN <w2agn@...> wrote:
>
> Finished my project, building the ATS-3A and BSA into a waterproof
> enclosure to use on the boat. All is working FB. XYL dubbed it the
> "Kitchensink" since it has everything except ....
>
> http://w2agn.net/kitchensink.html
>
> --
> _ _ _ _ _
> / \ / \ / \ / \ / \ John L. Sielke
> (W)(2)(A)(G)(N) http://w2agn.net
> _/ _/ _/ _/ _/ http://www.blurty.com/users/w2agn
>

799. Re: [AT_Sprint] Re: New Rig dubbed "Kitchen Sink"

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-19 17:17:05 UTC
From: W2AGN
Topic: 795 Message: 799

fixnwrtr wrote:
> John,
>
> How big is it and how much does it weigh?
>
> Jackie Cornwell
> AC0CA
>]
The Pelican case is 10" X 9" X 5" deep. The panel on the rig is 7" X 7.5". There is plenty of storage room left in the bottom os the case for stuff, as I noted. I didn't care about "Spartan Sprint" but wanted waterproof, all-in-on-box rig to take out on the boat.

--

_ _ _ _ _
/ \ / \ / \ / \ / \ John L. Sielke
(W)(2)(A)(G)(N) http://w2agn.net
_/ _/ _/ _/ _/ http://www.blurty.com/users/w2agn
check out: http://groups.yahoo.com/group/QRPariahs/

800. 40M power

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-19 17:53:08 UTC
From: W2AGN
Topic: 800 Message: 800

Just did the 40M modules for the "Kitchensink" aka ATS3A. Now with 10.9V from the BSA regulator I get 5.4W on 20M, 4.7W on 80M but only 2.2W on 40M, after diddling with the turns spacing on LF1. Is lower output typical with the 40M module? Haven't done the 30M one yet. 2 40T toroids are enough for one day!

--

_ _ _ _ _
/ \ / \ / \ / \ / \ John L. Sielke
(W)(2)(A)(G)(N) http://w2agn.net
_/ _/ _/ _/ _/ http://www.blurty.com/users/w2agn
check out: http://groups.yahoo.com/group/QRPariahs/

801. Re: [AT_Sprint] 40M power

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-19 19:53:24 UTC
From: Karl Larsen
Topic: 800 Message: 801

W2AGN wrote:
> Just did the 40M modules for the "Kitchensink" aka ATS3A. Now with 10.9V from
> the BSA regulator I get 5.4W on 20M, 4.7W on 80M but only 2.2W on 40M, after
> diddling with the turns spacing on LF1. Is lower output typical with the 40M
> module? Haven't done the 30M one yet. 2 40T toroids are enough for one day!
>
Hi John No. The usual is 80 40 30 are fine but 20 is a little low. I
think you may have the wrong value of capacitor on the 40 filter board.
But who am I to talk, I only have 8 surface mount resistors mounted so
far, on my Base unit.

73 Karl

802. Filter Mods

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-19 20:54:03 UTC
From: Rob May
Topic: 802 Message: 802

Oops, had a brain freeze, look here:
http://www.w1mt.qrpradio.com/
Not in the files section.
Rob
NV5E

Get Hilary Duff?s homepage with her photos, music, and more.
http://www.live.com/?addtemplate=hilary&ocid=T001MSN30A0701

803. RE: [AT_Sprint] 40M power

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-19 20:48:57 UTC
From: Rob May
Topic: 800 Message: 803

John,
My ATS-3A is also low on power on 40M, but not terribly so. About 25% less
than the other bands. If you look in the files section of this Yahoo group,
you'll find modifications for the 40M band filter. I haven't had time to
try them yet.
Rob
NV5E

>From: W2AGN <w2agn@...>
>Reply-To: AT_Sprint@yahoogroups.com
>To: AT_Sprint@yahoogroups.com
>Subject: [AT_Sprint] 40M power
>Date: Fri, 19 Jan 2007 12:53:08 -0500
>
>Just did the 40M modules for the "Kitchensink" aka ATS3A. Now with 10.9V
>from
>the BSA regulator I get 5.4W on 20M, 4.7W on 80M but only 2.2W on 40M,
>after
>diddling with the turns spacing on LF1. Is lower output typical with the
>40M
>module? Haven't done the 30M one yet. 2 40T toroids are enough for one day!
>--
>---
> _ _ _ _ _
> / \ / \ / \ / \ / \ John L. Sielke
>(W)(2)(A)(G)(N) http://w2agn.net
> _/ _/ _/ _/ _/ http://www.blurty.com/users/w2agn
>check out: http://groups.yahoo.com/group/QRPariahs/

Get in the mood for Valentine's Day. View photos, recipes and more on your
Live.com page.
http://www.live.com/?addTemplate=ValentinesDay&ocid=T001MSN30A0701

804. RE: [AT_Sprint] 40M power

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-19 22:10:35 UTC
From: Lutz Bergner
Topic: 800 Message: 804

John and Rob,

just put 100p parallel to C2F . That cures it. Please look at David
Meachams W6EMD File in the File Section MyATS.doc

72s

Lutz, DL2HRP

Am Freitag, den 19.01.2007, 14:48 -0600 schrieb Rob May:
> John,
> My ATS-3A is also low on power on 40M, but not terribly so. About 25%
> less
> than the other bands. If you look in the files section of this Yahoo
> group,
> you'll find modifications for the 40M band filter. I haven't had time
> to
> try them yet.
> Rob
> NV5E
>

805. January RFTB

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-20 05:33:09 UTC
From: Larry Makoski W2LJ
Topic: 805 Message: 805

This Sunday evening, the Flying Pigs Amateur Radio Club International will be holding its monthly Run For The Bacon. This is a friendly, two hour QRP CW Sprint, which is open to ALL radio amateurs, will last from 9:00 - 11:00PM EST (0200-0400 UTC Monday).

You may work stations once per band on 160, 80, 40, 20, 15 or 10 Meters. Suggested starting frequencies are 1.812, 3.562, 7.044, 14.062, 21.062, and 28.062 MHz.

The exchange is RST, S/P/C (State, Province, Country) and Flying Pigs membership number. If you're not a member of the Flying Pigs, and would like to be; then please click on the "membership" hyperlink on .http://www.gentzow.com/fpqrp/ Otherwise, non-members can just use their output power figure.

You can report your score via the Autolog page which can be found at :
http://gentzow.com/fpqrp/autolog.asp
or you can mail your logs to the address given on the Autolog page. The deadline for logs is January 27th at 2400 UTC.

Hope to catch you on the air Sunday evening!

72 es "oo"
Larry W2LJ FP#612

806. ATS-3 Headset Impedance

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-21 02:02:05 UTC
From: Joe Rocci
Topic: 806 Message: 806

Can someone tell me what the optimum impedance is for a headset to be used with the ATS-3? I't might be staring me in the face in the manual, but darn if I could find it. I've been using what must be high impedance earbuds from my MP3 player, but the volume seems pretty low. Maybe it's designed for a lower impedance load?

Joe
W3JDR

807. RE: [AT_Sprint] 40M power

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-21 05:48:00 UTC
From: kr4ez@aol.com
Topic: 800 Message: 807

i put the 100 pf cap on my 40 meter modual and it fixed it right up but it was only about 25 percent of like another post stated.

-----Original Message-----

From: Lutz Bergner <l.bergner@...>
Subj: RE: [AT_Sprint] 40M power
Date: Fri Jan 19, 2007 17:10
Size: 1K
To: AT_Sprint@yahoogroups.com

John and Rob,

just put 100p parallel to C2F . That cures it. Please look at David Meachams W6EMD File in the File Section MyATS.doc

72s

Lutz, DL2HRP

Am Freitag, den 19.01.2007, 14:48 -0600 schrieb Rob May:
> John,
> My ATS-3A is also low on power on 40M, but not terribly so. About 25%
> less
> than the other bands. If you look in the files section of this Yahoo
> group,
> you'll find modifications for the 40M band filter. I haven't had time
> to
> try them yet.
> Rob
> NV5E
>

Yahoo! Groups Links

808. Re: [AT_Sprint] ATS-3 Headset Impedance

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-21 05:58:00 UTC
From: kr4ez@aol.com
Topic: 806 Message: 808

mine was very load also so i use a radio shack in line volume control. also had to raise the resistor value for the sidetone to about 800 k ohms. a search for KL7R's web sight will tell about the sidetone mod. he only went to 300 or 400 k ohms if i remember corectlly.

-----Original Message-----

From: "Joe Rocci" <joe@...>
Subj: [AT_Sprint] ATS-3 Headset Impedance
Date: Sat Jan 20, 2007 21:02
Size: 2K
To: <AT_Sprint@yahoogroups.com>

Can someone tell me what the optimum impedance is for a headset to be used with the ATS-3? I't might be staring me in the face in the manual, but darn if I could find it. I've been using what must be high impedance earbuds from my MP3 player, but the volume seems pretty low. Maybe it's designed for a lower impedance load?

Joe
W3JDR

809. RE: [AT_Sprint] ATS-3 Headset Impedance

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-21 04:44:45 UTC
From: Richard Bennett
Topic: 806 Message: 809

I have had the same problem with low audio output. I have tried several headphones and earbuds. I think lower impedence headphones work better. When I use it at home, I plug it into an amplified speaker.

de kc0pet, Rick

----- Original Message -----
From: Joe Rocci
To: AT_Sprint@yahoogroups.com
Sent: 01/20/2007 8:03:22 PM
Subject: [AT_Sprint] ATS-3 Headset Impedance

Can someone tell me what the optimum impedance is for a headset to be used with the ATS-3? I't might be staring me in the face in the manual, but darn if I could find it. I've been using what must be high impedance earbuds from my MP3 player, but the volume seems pretty low. Maybe it's designed for a lower impedance load?

Joe
W3JDR

810. FS ATS3A Kit

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-21 14:37:42 UTC
From: russellhulett
Topic: 810 Message: 810

I purchased one of the last ATS3As from Steve's last run, received it two weeks ago. Have second thoughts about building this kit because have more QRP rigs than can keep up with. The kit is in it's unopened bag. Selling for my cost, $165 + priority mail + insurance + confirmation. Paypal or USPS Money Order for $175, and your address (CONUS only please).

Thought this had sold earlier, but money never sent and my email queries aren't being answered anymore, guess the person changed his mind. First person sending $ gets the kit.

73, R. C.(Curt) Hulett KB5JO

811. Re: [AT_Sprint] FS ATS3A Kit

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-21 15:13:41 UTC
From: Chuck Milam, KF9FR
Topic: 810 Message: 811

russellhulett wrote:

> Thought this had sold earlier, but money never sent and my email
> queries aren't being answered anymore, guess the person changed his
> mind. First person sending $ gets the kit.

I'll take it. I can send via PayPal.

--
Chuck Milam, KF9FR
KF9FR@...

812. Re: [AT_Sprint] 40M power

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-21 13:39:53 UTC
From: W2AGN
Topic: 800 Message: 812

kr4ez@... wrote:
> i put the 100 pf cap on my 40 meter modual and it fixed it right up but it was only about 25 percent of like another post stated.
>
>
> -----Original Message-----
>
> From: Lutz Bergner <l.bergner@...>
> Subj: RE: [AT_Sprint] 40M power
> Date: Fri Jan 19, 2007 17:10
> Size: 1K
> To: AT_Sprint@yahoogroups.com
>
> John and Rob,
>
> just put 100p parallel to C2F . That cures it. Please look at David
> Meachams W6EMD File in the File Section MyATS.doc
>
> 72s
>
> Lutz, DL2HRP
>

Well, I went back and read the archives, and went ahead and did the whole fix.
Added a turn to L1 and L2, and changed C2 from 100pf to 83pf. Brought the power
at 10.9V up to 4.75 on 40M. Not as high as 30 or 20, but plenty good enough.
Receiver in the ATS-3A seems much hotter than the ATS-3. Great little rig!

_ _ _ _ _
/ \ / \ / \ / \ / \ John L. Sielke
(W)(2)(A)(G)(N) http://w2agn.net
_/ _/ _/ _/ _/ http://www.blurty.com/users/w2agn
check out: http://groups.yahoo.com/group/QRPariahs/

813. Re: ATS-3 Headset Impedance

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-21 13:48:06 UTC
From: Joe Rocci
Topic: 806 Message: 813

I'm gonna answer my own question here, as I just looked up the IC. Looks like it was designed to drive 8ohm loads, so lower impedance phones means more power output. Gotta get me some low-z ear buds.

Thanks

Joe
W3JDR
----- Original Message -----
From: Joe Rocci
To: AT_Sprint@yahoogroups.com
Sent: Saturday, January 20, 2007 9:02 PM
Subject: ATS-3 Headset Impedance

Can someone tell me what the optimum impedance is for a headset to be used with the ATS-3? I't might be staring me in the face in the manual, but darn if I could find it. I've been using what must be high impedance earbuds from my MP3 player, but the volume seems pretty low. Maybe it's designed for a lower impedance load?

Joe
W3JDR

814. Re: FS ATS3A Kit SOLD SOLD

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-21 22:56:03 UTC
From: russellhulett
Topic: 810 Message: 814

Thanks, the Kit has been SOLD

815. Re: [AT_Sprint] ATS-3 Headset Impedance

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-21 13:37:58 UTC
From: Joe Rocci
Topic: 806 Message: 815

For the time being, I made a resistor mod in the output stage that raises the gain about 8dB, but it's still lower than I'd like in my headphones, leading me to believe it was designed for lower impedance. When I get more time, I'll look up the amplifier IC and determine if it can drive low impedance loads.

Joe
W3JDR

----- Original Message -----
From: Richard Bennett
To: AT_Sprint@yahoogroups.com
Sent: Saturday, January 20, 2007 11:44 PM
Subject: RE: [AT_Sprint] ATS-3 Headset Impedance

I have had the same problem with low audio output. I have tried several headphones and earbuds. I think lower impedence headphones work better. When I use it at home, I plug it into an amplified speaker.

de kc0pet, Rick

----- Original Message -----
From: Joe Rocci
To: AT_Sprint@yahoogroups.com
Sent: 01/20/2007 8:03:22 PM
Subject: [AT_Sprint] ATS-3 Headset Impedance

Can someone tell me what the optimum impedance is for a headset to be used with the ATS-3? I't might be staring me in the face in the manual, but darn if I could find it. I've been using what must be high impedance earbuds from my MP3 player, but the volume seems pretty low. Maybe it's designed for a lower impedance load?

Joe
W3JDR

816. Re: [AT_Sprint] ATS-3 Headset Impedance

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-21 13:44:19 UTC
From: Joe Rocci
Topic: 806 Message: 816

You might have the opposite problem I'm experiencing - does "very load" mean "very loud" or "very low"??

Joe
W3JDR

----- Original Message -----
From: kr4ez@...
To: AT_Sprint@yahoogroups.com
Sent: Sunday, January 21, 2007 12:58 AM
Subject: Re: [AT_Sprint] ATS-3 Headset Impedance

mine was very load also so i use a radio shack in line volume control. also had to raise the resistor value for the sidetone to about 800 k ohms. a search for KL7R's web sight will tell about the sidetone mod. he only went to 300 or 400 k ohms if i remember corectlly.

-----Original Message-----

From: "Joe Rocci" <joe@...>
Subj: [AT_Sprint] ATS-3 Headset Impedance
Date: Sat Jan 20, 2007 21:02
Size: 2K
To: <AT_Sprint@yahoogroups.com>

Can someone tell me what the optimum impedance is for a headset to be used with the ATS-3? I't might be staring me in the face in the manual, but darn if I could find it. I've been using what must be high impedance earbuds from my MP3 player, but the volume seems pretty low. Maybe it's designed for a lower impedance load?

Joe
W3JDR

817. Run for the Bacon, 1/21/2007, 6:00 pm

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-22 01:46:31 UTC
From: AT_Sprint@yahoogroups.com
Topic: 817 Message: 817

Reminder from: AT_Sprint Yahoo! Group
http://groups.yahoo.com/group/AT_Sprint/cal

Run for the Bacon
Sunday January 21, 2007
6:00 pm - 8:00 pm
(This event repeats every month on the third Sunday.)
Location: Your shack or anywhere

Notes:
This Sunday evening, the Flying Pigs Amateur Radio Club International will be holding its monthly Run For The Bacon. This is a friendly, two hour QRP CW Sprint, which is open to ALL radio amateurs, will last from 9:00 - 11:00PM EDT (0200-0400 UTC Monday).

You may work stations once per band on 160, 80, 40, 20, 15 or 10 Meters. Suggested starting frequencies are 1.812, 3.562, 7.044, 14.062, 21.062, and 28.062 MHz.

The exchange is RST, S/P/C (State, Province, Country) and Flying Pigs membership number. If you're not a member of the Flying Pigs, and would like to be; then please cli

All Rights Reserved
Copyright ? 2007
Yahoo! Inc.
http://www.yahoo.com

Privacy Policy:
http://privacy.yahoo.com/privacy/us

Terms of Service:
http://docs.yahoo.com/info/terms/

818. RE: [AT_Sprint] 40M power

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-22 12:05:36 UTC
From: Lutz Bergner
Topic: 800 Message: 818

Chris (?)

100pF is only a rule of thumb. If you are sure about not having mixed up the capacitor values and have counted turns in the inner of the toroids , you could play a bit with L1F and C2F. These two have most influence to the match of the PA to the LP Filter. First try squeezing/expanding the turns of L1 a bit. If it doesn't help - try 1 turn less or more. Try to find out the trend by testing power at the band ends.

72s

Lutz, DL2HRP

Am Sonntag, den 21.01.2007, 00:48 -0500 schrieb kr4ez@...:
>
> i put the 100 pf cap on my 40 meter modual and it fixed it right up
> but it was only about 25 percent of like another post stated.

>
>
>
--
iXadmin

---
* Systemadministration
* Netzwerkberatung
* Internetdienstleistungen

Tel.: 034922 66717
Fax.: 034922 66718
mobil: 0175 2631032
VOIP(sipgate): 01801 6666260511
Mail: l.bergner@...

819. Re: [AT_Sprint] FS ATS3A Kit

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-22 17:25:31 UTC
From: Kurt
Topic: 810 Message: 819

russellhulett wrote:
> I purchased one of the last ATS3As from Steve's last run, received it
> two weeks ago. Have second thoughts about building this kit because
> have more QRP rigs than can keep up with. The kit is in it's unopened
> bag. Selling for my cost, $165 + priority mail + insurance +
> confirmation. Paypal or USPS Money Order for $175, and your address
> (CONUS only please).
>
> Thought this had sold earlier, but money never sent and my email
> queries aren't being answered anymore, guess the person changed his
> mind. First person sending $ gets the kit.
>
> 73, R. C.(Curt) Hulett KB5JO

I wonder how many he does in a run? Judging by the growing popularity,
he probably could get away with a larger run. I expect he has to order
"X" number of boards. Order too many and he's stuck with the leftovers.
Too few and it just gets people salvating for his next project. :-)

Kurt

820. ATS-3 Audio Bandpass

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-22 19:36:01 UTC
From: Joe Rocci
Topic: 820 Message: 820

My Spice analysis of the audio output stage in the ATS-3 indicates that it's peaked at 400 Hz, even though the manual says 600 Hz. Any comments on where it should be peaked?

Joe
W3JDR

821. Re: [AT_Sprint] ATS-3 Audio Bandpass

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-22 20:04:45 UTC
From: Jim Larsen - AL7FS
Topic: 820 Message: 821

I haven't built my ATS-3 yet but if it ends up at 400-500Hz, I will be a happy camper. 600Hz and above is terrible for my hearing.

Jim
Jim Larsen
Anchorage, Alaska
http://www.AL7FS.us/

Joe Rocci wrote:
> My Spice analysis of the audio output stage in the ATS-3 indicates that
> it's peaked at 400 Hz, even though the manual says 600 Hz. Any comments
> on where it should be peaked?
>
> Joe
> W3JDR
>
>
>

822. Re: [AT_Sprint] ATS-3 Audio Bandpass

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-22 20:24:19 UTC
From: Michael Harnage
Topic: 820 Message: 822

Which stage are you looking at? The first stage is set
up as low pass (can't remember the target freq
offhand), the middle (panasonic agc chip) is broad
band and the last stage is set up at 600hz bandpass.
Pretty standard op amp configurations (I have run the
calcs to confirm and it seems to be correct in
operation), so not sure why spice is giving up
something different???

Steve's firmware gives you a 585Hz sidetone, maybe
that will help you decide where you might want to go.

-mike/w1mt

--- Joe Rocci <joe@...> wrote:

> My Spice analysis of the audio output stage in the
> ATS-3 indicates that it's peaked at 400 Hz, even
> though the manual says 600 Hz. Any comments on where
> it should be peaked?

The fish are biting.
Get more visitors on your site using Yahoo! Search
Marketing.
http://searchmarketing.yahoo.com/arp/sponsoredsearch_v2.php

Be a PS3 game guru.
Get your game face on with the latest PS3 news and previews at Yahoo! Games.
http://videogames.yahoo.com/platform?platform=120121

823. Re: [AT_Sprint] ATS-3 Audio Bandpass

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-22 20:42:19 UTC
From: Joe Rocci
Topic: 820 Message: 823

Jim,

I got mine running over the weekend, with one band module built up (20M) . Been testing the receiver with a signal generator and comparing to Spice analysis. A couple of observations so far:

1) The audio output level is a little low for my headphones. Lowering R8 from 113K to about 27K raised the level enough for me.
2) The Spice predicted bandwidth of the 20M band filter seems wider than it needs to be, and it looks like an additional few db of gain might be available by optimizing the impedance match into the mixer. I'll report as I work through it.
3) In spite of what the manual says, Spice analysis indicates the audio bandpass is centered at 400 hz. I'll confirm with test equip later.

As I go through the unit with a fine tooth comb, I keep looking for ways I would have done things 'better', but it looks like Steve has really thought this through and optimized if for the most performance possible in the space it occupies and the power it consumes. There are a few tweaks that can be performed, but nothing that's going to make a dramatic improvement. Nice job Steve!

Good luck bringing your unit up Jim.

Joe
W3JDR

----- Original Message -----
From: Jim Larsen - AL7FS
To: AT_Sprint@yahoogroups.com
Sent: Monday, January 22, 2007 3:04 PM
Subject: Re: [AT_Sprint] ATS-3 Audio Bandpass

I haven't built my ATS-3 yet but if it ends up at 400-500Hz, I will be a
happy camper. 600Hz and above is terrible for my hearing.

Jim
Jim Larsen
Anchorage, Alaska
http://www.AL7FS.us/

Joe Rocci wrote:
> My Spice analysis of the audio output stage in the ATS-3 indicates that
> it's peaked at 400 Hz, even though the manual says 600 Hz. Any comments
> on where it should be peaked?
>
> Joe
> W3JDR
>

>
>

824. RE: [AT_Sprint] 40M power

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-22 21:16:00 UTC
From: kr4ez@aol.com
Topic: 800 Message: 824

i think you reponded to the wrong person. i have tryied all of the things you sugested a whileback and the cap did the trick. i think there is a file with the appropriate values to fix this in the file section. the 100pf cap is added in parallel with another cap. i also do not think the value is axactly 100 pf.

-----Original Message-----

From: Lutz Bergner <l.bergner@...>
Subj: RE: [AT_Sprint] 40M power
Date: Mon Jan 22, 2007 7:15
Size: 1K
To: AT_Sprint@yahoogroups.com

Chris (?)

100pF is only a rule of thumb. If you are sure about not having mixed up
the capacitor values and have counted turns in the inner of the
toroids , you could play a bit with L1F and C2F. These two have most
influence to the match of the PA to the LP Filter. First try
squeezing/expanding the turns of L1 a bit. If it doesn't help - try 1
turn less or more. Try to find out the trend by testing power at the
band ends.

72s

Lutz, DL2HRP

Am Sonntag, den 21.01.2007, 00:48 -0500 schrieb kr4ez@...:
>
> i put the 100 pf cap on my 40 meter modual and it fixed it right up
> but it was only about 25 percent of like another post stated.

>
>
>
--
iXadmin

----
* Systemadministration
* Netzwerkberatung
* Internetdienstleistungen

Tel.: 034922 66717
Fax.: 034922 66718
mobil: 0175 2631032

VOIP(sipgate): 01801 6666260511
Mail: l.bergner@...

Yahoo! Groups Links

825. Re: [AT_Sprint] ATS-3 Audio Bandpass

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-22 20:13:39 UTC
From: Thomas Kuehl
Topic: 820 Message: 825

Joe,

I simulated the filter somtime in the past using TINA SPICE. My simulation results indicated a center frequency of 600Hz (596Hz) and a -3dB bandwidth of about 120Hz. For my ATS-3A, I opted to make the component substitutions and built a 1.8kHz low-pass filter. So I've never really heard one with the usual narrow AF bandpass. My thought was I didn't need both a narrow IF filter and a narrow AF filter and I've been happy with the AF low-pass sound. Though I am curious whether anyone has anyone tried both of them?

'73, Thomas - AC7A (Tucson)

Joe Rocci <joe@...> wrote:
My Spice analysis of the audio output stage in the ATS-3 indicates that it's peaked at 400 Hz, even though the manual says 600 Hz. Any comments on where it should be peaked?

Joe
W3JDR

It's here! Your new message!
Get new email alerts with the free Yahoo! Toolbar.

Now that's room service! Choose from over 150,000 hotels
in 45,000 destinations on Yahoo! Travel to find your fit.

826. Re: [AT_Sprint] ATS-3 Audio Bandpass

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-22 20:39:50 UTC
From: Joe Rocci
Topic: 820 Message: 826

I'm refering to the output stage (I think that's what I already said). Spice analysis indicates it's precisely centered at 400 Hz. I'll check with the signal generator later today if I get a chance.

Joe
W3JDR

----- Original Message -----
From: Michael Harnage
To: AT_Sprint@yahoogroups.com
Sent: Monday, January 22, 2007 3:24 PM
Subject: Re: [AT_Sprint] ATS-3 Audio Bandpass

Which stage are you looking at? The first stage is set up as low pass (can't remember the target freq offhand), the middle (panasonic agc chip) is broad band and the last stage is set up at 600hz bandpass. Pretty standard op amp configurations (I have run the calcs to confirm and it seems to be correct in operation), so not sure why spice is giving up something different???

Steve's firmware gives you a 585Hz sidetone, maybe that will help you decide where you might want to go.

-mike/w1mt

--- Joe Rocci <joe@...> wrote:

> My Spice analysis of the audio output stage in the
> ATS-3 indicates that it's peaked at 400 Hz, even
> though the manual says 600 Hz. Any comments on where
> it should be peaked?

____
The fish are biting.
Get more visitors on your site using Yahoo! Search
Marketing.
http://searchmarketing.yahoo.com/arp/sponsoredsearch_v2.php

____
Be a PS3 game guru.
Get your game face on with the latest PS3 news and previews at Yahoo! Games.
http://videogames.yahoo.com/platform?platform=120121

827. RE: [AT_Sprint] ATS-3 Audio Bandpass

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-22 21:13:29 UTC
From: andrew.macallister@emersonprocess.com
Topic: 820 Message: 827

I had a blast with my ATS-3A last night on the Flying Pigs Run for The Bacon Sprint. It would have been nice if a few more piggies had participated though.

One thing I always wonder about - is the sidetone supposed to be the same as the received CW audio frequency? It would be appropriate that the center of the audio passband match the sidetone - true?

The audio out on my ATS-3A seems better than my ATS-3. Strong signals and high noise actually "hurt" the ears. I had to strain a bit on the ATS-3, even with a similar resistor mod. I also use the most sensitive and lightest earbuds I can find. The current choice are white Koss units with molding cones that go in the ear canal. They are in my rig pix in the photos section under W5ACM.

Andy W5ACM

From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com] On Behalf Of Joe Rocci
Sent: Monday, January 22, 2007 2:42 PM
To: AT_Sprint@yahoogroups.com
Subject: Re: [AT_Sprint] ATS-3 Audio Bandpass

Jim,

I got mine running over the weekend, with one band module built up (20M) . Been testing the receiver with a signal generator and comparing to Spice analysis. A couple of observations so far:

1) The audio output level is a little low for my headphones. Lowering R8 from 113K to about 27K raised the level enough for me.

2) The Spice predicted bandwidth of the 20M band filter seems wider than it needs to be, and it looks like an additional few db of gain might be available by optimizing the impedance match into the mixer. I'll report as I work through it.

3) In spite of what the manual says, Spice analysis indicates the audio bandpass is centered at 400 hz. I'll confirm with test equip later.

As I go through the unit with a fine tooth comb, I keep looking for ways I would have done things 'better', but it looks like Steve has really thought this through and optimized if for the most performance possible in the space it occupies and the power it consumes. There are a few tweaks that can be performed, but nothing that's going to make a dramatic improvement. Nice job Steve!

Good luck bringing your unit up Jim.

Joe

W3JDR

----- Original Message -----

From: Jim Larsen - AL7FS <mailto:jimlarsen2002@...>

To: AT_Sprint@yahoogroups.com <mailto:AT_Sprint@yahoogroups.com>

Sent: Monday, January 22, 2007 3:04 PM

Subject: Re: [AT_Sprint] ATS-3 Audio Bandpass

I haven't built my ATS-3 yet but if it ends up at 400-500Hz, I
will be a
happy camper. 600Hz and above is terrible for my hearing.

Jim
Jim Larsen
Anchorage, Alaska
http://www.AL7FS.us/ <http://www.AL7FS.us/>

Joe Rocci wrote:
> My Spice analysis of the audio output stage in the ATS-3
indicates that
> it's peaked at 400 Hz, even though the manual says 600 Hz. Any
comments
> on where it should be peaked?
>
> Joe
> W3JDR
>
>
>

828. Re: [AT_Sprint] ATS-3 Headset Impedance

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-22 21:26:00 UTC
From: kr4ez@aol.com
Topic: 806 Message: 828

you have to overlook my spelling. when reading my post always use the word that makes more sence. it was to loud and the larger resistor cut back on the signal going to the audio amp.

-----Original Message-----

From: "Joe Rocci" <joe@...>
Subj: Re: [AT_Sprint] ATS-3 Headset Impedance
Date: Sun Jan 21, 2007 18:03
Size: 3K
To: <AT_Sprint@yahoogroups.com>

You might have the opposite problem I'm experiencing - does "very load" mean "very loud" or "very low"??

Joe
W3JDR

----- Original Message -----
From: kr4ez@...
To: AT_Sprint@yahoogroups.com
Sent: Sunday, January 21, 2007 12:58 AM
Subject: Re: [AT_Sprint] ATS-3 Headset Impedance

mine was very load also so i use a radio shack in line volume control. also had to raise the resistor value for the sidetone to about 800 k ohms. a search for KL7R's web sight will tell about the sidetone mod. he only went to 300 or 400 k ohms if i remember corectlly.

-----Original Message-----

From: "Joe Rocci" <joe@...>
Subj: [AT_Sprint] ATS-3 Headset Impedance
Date: Sat Jan 20, 2007 21:02
Size: 2K
To: <AT_Sprint@yahoogroups.com>

Can someone tell me what the optimum impedance is for a headset to be used with the ATS-3? I't might be staring me in the face in the manual, but darn if I could find it. I've been using what must be high impedance earbuds from my MP3 player, but the volume seems pretty low. Maybe it's designed for a lower impedance load?

Joe
W3JDR

829. RE: [AT_Sprint] ATS-3 Audio Bandpass

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-22 21:46:51 UTC
From: Michael Harnage
Topic: 820 Message: 829

Inline comments below

--- andrew.macallister@... wrote:

> One thing I always wonder about - is the sidetone
> supposed to be the
> same as the received CW audio frequency?

Depends on how you adjust calibrate the rig. I like
the sidetone to match the offset so that I can zero
beat signals, so I calibrate so that this is true. Not
all calibration procedures will lead you to this
configuration.

> It would be
> appropriate that
> the center of the audio passband match the sidetone
> - true?

I think so.

-mike/w1mt

Looking for earth-friendly autos?
Browse Top Cars by "Green Rating" at Yahoo! Autos' Green Center.
http://autos.yahoo.com/green_center/

830. Re: [AT_Sprint] ATS-3 Audio Bandpass

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-22 21:43:55 UTC
From: Karl Larsen
Topic: 820 Message: 830

Hi Gang, your talking about the frequency the passband is tuned to.
This has a lot to do with the frequency of the BFO, which you move to a
frequency away from zero beat to one you like. You do this when your
tuning up the rig after building it and debugging errors.

If you don't like what it is now change it!

73 Karl K5DI

Michael Harnage wrote:
> Which stage are you looking at? The first stage is set
> up as low pass (can't remember the target freq
> offhand), the middle (panasonic agc chip) is broad
> band and the last stage is set up at 600hz bandpass.
> Pretty standard op amp configurations (I have run the
> calcs to confirm and it seems to be correct in
> operation), so not sure why spice is giving up
> something different???
>
> Steve's firmware gives you a 585Hz sidetone, maybe
> that will help you decide where you might want to go.
>
> -mike/w1mt
>
> --- Joe Rocci <joe@...> wrote:
>
>
>> My Spice analysis of the audio output stage in the
>> ATS-3 indicates that it's peaked at 400 Hz, even
>> though the manual says 600 Hz. Any comments on where
>> it should be peaked?
>>
>
>
>
>
>
> _____
> The fish are biting.
> Get more visitors on your site using Yahoo! Search
> Marketing.
> http://searchmarketing.yahoo.com/arp/sponsoredsearch_v2.php
>
>
>
> _____

> Be a PS3 game guru.
> Get your game face on with the latest PS3 news and previews at Yahoo! Games.
> http://videogames.yahoo.com/platform?platform=120121
>
>
>
> Yahoo! Groups Links
>
>
>
>
>
>

831. Re: [AT_Sprint] ATS-3 Audio Bandpass

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-22 21:37:17 UTC
From: Joe Rocci
Topic: 820 Message: 831

Tom,

I just ran the Spice simulation again to be triply sure my eyes aren't playing tricks on me - it says 400 hz on the dot, and it's about 200 Hz wide at the -6 dB points. Maybe your unit is different? For comparison purposes, here are the component values on my schematic:
R10 = 267K
R9 = 2.74K
R8 = 133K
C23 = .01uf
C22 = .01uf

I'm using a generic op-amp in the model, as I don't have a Spice model for the LM4808, but I doubt that's making any difference at a few hundred hz.

Joe
W3JDR

----- Original Message -----
From: Thomas Kuehl
To: AT_Sprint@yahoogroups.com
Sent: Monday, January 22, 2007 3:13 PM
Subject: Re: [AT_Sprint] ATS-3 Audio Bandpass

Joe,

I simulated the filter somtime in the past using TINA SPICE. My simulation results indicated a center frequency of 600Hz (596Hz) and a -3dB bandwidth of about 120Hz. For my ATS-3A, I opted to make the component substitutions and built a 1.8kHz low-pass filter. So I've never really heard one with the usual narrow AF bandpass. My thought was I didn't need both a narrow IF filter and a narrow AF filter and I've been happy with the AF low-pass sound. Though I am curious whether anyone has anyone tried both of them?

'73, Thomas - AC7A (Tucson)

Joe Rocci <joe@...> wrote:
My Spice analysis of the audio output stage in the ATS-3 indicates that it's peaked at 400 Hz, even though the manual says 600 Hz. Any comments on where it should be peaked?

Joe
W3JDR

It's here! Your new message!
Get new email alerts with the free Yahoo! Toolbar.

Now that's room service! Choose from over 150,000 hotels
in 45,000 destinations on Yahoo! Travel to find your fit.

832. Re: ATS-3 Audio Bandpass

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-22 22:31:14 UTC
From: w1mt
Topic: 820 Message: 832

Components look right on. I run spice "manually" by using the standard formulas. Look here for an example: < http://www.swarthmore.edu/NatSci/echeeve1/Ref/FilterBkgrnd/Filters.html >

I get 594Hz.

Only thing I can think of is perhaps the layout you are simulating might not match the ATS3A schematic?

Btw, I modified one of my rigs to be low pass at this stage and left another stock. If the bands are crowded (contest) I'll use the stock rig otherwise I use the modified rig.

-mike
--- In AT_Sprint@yahoogroups.com, "Joe Rocci" <joe@...> wrote:
>
> Tom,
>
> I just ran the Spice simulation again to be triply sure my eyes aren't playing tricks on me - it says 400 hz on the dot, and it's about 200 Hz wide at the -6 dB points. Maybe your unit is different? For comparison purposes, here are the component values on my schematic:
> R10 = 267K
> R9 = 2.74K
> R8 = 133K
> C23 = .01uf
> C22 = .01uf
>
> I'm using a generic op-amp in the model, as I don't have a Spice model for the LM4808, but I doubt that's making any difference at a few hundred hz.
>
> Joe
> W3JDR
>

833. Re: [AT_Sprint] ATS-3 Audio Bandpass

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-22 22:19:43 UTC
From: Joe Rocci
Topic: 820 Message: 833

Tom,

It appears that your right. I just measured the response of the stage with a function generator, and it peaks up at 580 hz. However, the Spice simulation still says 400 hz and I've checked it about 10 times. This is no doubt some sort of cockpit problem, but I'm really bewildered right now.....

Joe
W3JDR

----- Original Message -----
From: Thomas Kuehl
To: AT_Sprint@yahoogroups.com
Sent: Monday, January 22, 2007 3:13 PM
Subject: Re: [AT_Sprint] ATS-3 Audio Bandpass

Joe,

I simulated the filter somtime in the past using TINA SPICE. My simulation results indicated a center frequency of 600Hz (596Hz) and a -3dB bandwidth of about 120Hz. For my ATS-3A, I opted to make the component substitutions and built a 1.8kHz low-pass filter. So I've never really heard one with the usual narrow AF bandpass. My thought was I didn't need both a narrow IF filter and a narrow AF filter and I've been happy with the AF low-pass sound. Though I am curious whether anyone has anyone tried both of them?

'73, Thomas - AC7A (Tucson)

Joe Rocci <joe@...> wrote:
My Spice analysis of the audio output stage in the ATS-3 indicates that it's peaked at 400 Hz, even though the manual says 600 Hz. Any comments on where it should be peaked?

Joe
W3JDR

It's here! Your new message!
Get new email alerts with the free Yahoo! Toolbar.

Now that's room service! Choose from over 150,000 hotels
in 45,000 destinations on Yahoo! Travel to find your fit.

834. Re: [AT_Sprint] Re: ATS-3 Audio Bandpass

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-22 22:44:18 UTC
From: Joe Rocci
Topic: 820 Message: 834

Mike,

Thanks for the reply.

This is a weird one! I have now found that, contrary to my earlier belief, the simulation IS very highly dependent on the Spice model chosen for the amplifier chip. With different amps (all with GBW's well, well,well (that's akin to 3 orders or magnitude) above the center freq), I can get responses that peak anywhere from 200 to 600 Hz. This will surely keep me awake tonight

Joe
W3JDR

----- Original Message -----
From: w1mt
To: AT_Sprint@yahoogroups.com
Sent: Monday, January 22, 2007 5:31 PM
Subject: [AT_Sprint] Re: ATS-3 Audio Bandpass

Components look right on. I run spice "manually" by using the standard formulas. Look here for an example: < http://www.swarthmore.edu/NatSci/echeeve1/Ref/FilterBkgrnd/Filters.html >

I get 594Hz.

Only thing I can think of is perhaps the layout you are simulating might not match the ATS3A schematic?

Btw, I modified one of my rigs to be low pass at this stage and left another stock. If the bands are crowded (contest) I'll use the stock rig otherwise I use the modified rig.

-mike
--- In AT_Sprint@yahoogroups.com, "Joe Rocci" <joe@...> wrote:
>
> Tom,
>
> I just ran the Spice simulation again to be triply sure my eyes aren't playing tricks on me - it says 400 hz on the dot, and it's about 200 Hz wide at the -6 dB points. Maybe your unit is different? For comparison purposes, here are the component values on my schematic:
> R10 = 267K
> R9 = 2.74K
> R8 = 133K
> C23 = .01uf
> C22 = .01uf
>

> I'm using a generic op-amp in the model, as I don't have a Spice model for the LM4808, but I doubt that's making any difference at a few hundred hz.
>
> Joe
> W3JDR
>

835. Re: [AT_Sprint] Re: ATS-3 Audio Bandpass

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-22 23:28:35 UTC
From: Thomas Kuehl
Topic: 820 Message: 835

Joe,

The gain-bandwith of the op-amp indeed affects the filter characteristics. Recently, I did some analysis of the affect of op-amp gain-bandwidth (GBW) on active bandpass filter performance in a low voltage gain. The most sensitive bandpass filter parameter to GBW was the filter center frequency. And then to a lesser extent the gain and bandwidth characteristics. An ideal op-amp will provide perfect performance, but an op-amp with too low of GBW for the application will move the center frequency way down. This is a generalization.

'73, Thomas - AC7A

Joe Rocci <joe@...> wrote:
Mike,

Thanks for the reply.

This is a weird one! I have now found that, contrary to my earlier belief, the simulation IS very highly dependent on the Spice model chosen for the amplifier chip. With different amps (all with GBW's well, well,well (that's akin to 3 orders or magnitude) above the center freq), I can get responses that peak anywhere from 200 to 600 Hz. This will surely keep me awake tonight

Joe
W3JDR

----- Original Message -----
From: w1mt
To: AT_Sprint@yahoogroups.com
Sent: Monday, January 22, 2007 5:31 PM
Subject: [AT_Sprint] Re: ATS-3 Audio Bandpass

Components look right on. I run spice "manually" by using the standard formulas. Look here for an example: <
http://www.swarthmore.edu/NatSci/echeeve1/Ref/FilterBkgrnd/Filters.html >

I get 594Hz.

Only thing I can think of is perhaps the layout you are simulating might not match the ATS3A schematic?

Btw, I modified one of my rigs to be low pass at this stage and left another stock. If the bands are crowded (contest) I'll use the stock rig otherwise I use the modified rig.

-mike
--- In AT_Sprint@yahoogroups.com, "Joe Rocci" <joe@...> wrote:
>

> Tom,
>
> I just ran the Spice simulation again to be triply sure my eyes
aren't playing tricks on me - it says 400 hz on the dot, and it's
about 200 Hz wide at the -6 dB points. Maybe your unit is different?
For comparison purposes, here are the component values on my schematic:
> R10 = 267K
> R9 = 2.74K
> R8 = 133K
> C23 = .01uf
> C22 = .01uf
>
> I'm using a generic op-amp in the model, as I don't have a Spice
model for the LM4808, but I doubt that's making any difference at a
few hundred hz.
>
> Joe
> W3JDR
>

Finding fabulous fares is fun.
Let Yahoo! FareChase search your favorite travel sites to find flight and hotel bargains.

Cheap Talk? Check out Yahoo! Messenger's low PC-to-Phone call rates.

836. Re: [AT_Sprint] Re: ATS-3 Audio Bandpass

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-23 01:52:57 UTC
From: Joe Rocci
Topic: 820 Message: 836

Thomas,

Well, that was my suspicion about what's going on with the simulation, so to confirm it I put in an op-amp that has user-definable parameters. When the gain-bandwidth was lowered significantly (far lower than any of the modern op-amp models should be), it did change the center frequency and distort the shape. What I'm seeing, however, seems to defy everyhing I know about this stuff and make me wonder if there's something wrong with the op-amp model libraries I'm using. The Spice version is called Catena by a UK firm called Simetrix. Tomorrow I'm going to try another Spice variant and see what happens. Bottom line, though, is that the stage does have a measured center frequency of very close to 600 Hz despite what Catena Spice says.

Joe
W3JDR

----- Original Message -----
From: Thomas Kuehl
To: AT_Sprint@yahoogroups.com
Sent: Monday, January 22, 2007 6:28 PM
Subject: Re: [AT_Sprint] Re: ATS-3 Audio Bandpass

Joe,

The gain-bandwith of the op-amp indeed affects the filter characteristics. Recently, I did some analysis of the affect of op-amp gain-bandwidth (GBW) on active bandpass filter performance in a low voltage gain. The most sensitive bandpass filter parameter to GBW was the filter center frequency. And then to a lesser extent the gain and bandwidth characteristics. An ideal op-amp will provide perfect performance, but an op-amp with too low of GBW for the application will move the center frequency way down. This is a generalization.

'73, Thomas - AC7A

Joe Rocci <joe@...> wrote:
Mike,

Thanks for the reply.

This is a weird one! I have now found that, contrary to my earlier belief, the simulation IS very highly dependent on the Spice model chosen for the amplifier chip. With different amps (all with GBW's well, well,well (that's akin to 3 orders or magnitude) above the center freq), I can get responses that peak anywhere from 200 to 600 Hz. This will surely keep me awake tonight

Joe
W3JDR

----- Original Message -----
From: w1mt
To: AT_Sprint@yahoogroups.com
Sent: Monday, January 22, 2007 5:31 PM
Subject: [AT_Sprint] Re: ATS-3 Audio Bandpass

Components look right on. I run spice "manually" by using the standard formulas. Look here for an example: < http://www.swarthmore.edu/NatSci/echeeve1/Ref/FilterBkgrnd/Filters.html >

I get 594Hz.

Only thing I can think of is perhaps the layout you are simulating might not match the ATS3A schematic?

Btw, I modified one of my rigs to be low pass at this stage and left another stock. If the bands are crowded (contest) I'll use the stock rig otherwise I use the modified rig.

-mike
--- In AT_Sprint@yahoogroups.com, "Joe Rocci" <joe@...> wrote:
>
> Tom,
>
> I just ran the Spice simulation again to be triply sure my eyes aren't playing tricks on me - it says 400 hz on the dot, and it's about 200 Hz wide at the -6 dB points. Maybe your unit is different? For comparison purposes, here are the component values on my schematic:
> R10 = 267K
> R9 = 2.74K
> R8 = 133K
> C23 = .01uf
> C22 = .01uf
>
> I'm using a generic op-amp in the model, as I don't have a Spice model for the LM4808, but I doubt that's making any difference at a few hundred hz.
>
> Joe
> W3JDR
>

Finding fabulous fares is fun.
Let Yahoo! FareChase search your favorite travel sites to find flight and hotel bargains.

Cheap Talk? Check out Yahoo! Messenger's low PC-to-Phone call rates.

837. ATS3A in new home

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-23 05:03:20 UTC
From: camqrp
Topic: 837 Message: 837

I've just posted a photo of my ATS3A which now resides in a new home.
The box is one of the Altoids Alternate Enclosures by Doug Hauff at
American Morse, http://americanmorse.com/index.htm.

Solid!

-- Cam N6GA

838. Any other sprint kits FS?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-23 02:02:09 UTC
From: john
Topic: 838 Message: 838

Am looking for a kit also (I missed the last go-round).

Any others with an un - needed kit? (assembled considered too!)

Thanks all!
John K5MO

839. Re: [AT_Sprint] ATS3A in new home

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-23 15:59:02 UTC
From: Karl Larsen
Topic: 837 Message: 839

Looks nice but the Altoid tin is a lot cheaper, and I like Altoids :-)

The $24.00 price is too steep for me.

73 Karl K5DI

camqrp wrote:
> I've just posted a photo of my ATS3A which now resides in a new home.
> The box is one of the Altoids Alternate Enclosures by Doug Hauff at
> American Morse, http://americanmorse.com/index.htm.
>
> Solid!
>
> -- Cam N6GA
>
>
>
>
> Yahoo! Groups Links
>
>
>
>
>
>
>

840. Re: ATS3A in new home

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-23 16:26:20 UTC
From: phm7744
Topic: 837 Message: 840

Hi Cam,

I have the same box waiting for me to complete the 3A. Any problems, comments or advice to offer about drilling/installing the ATS into the box? BTW... nice picture!

Pete WK8S

--- In AT_Sprint@yahoogroups.com, "camqrp" <camqrp@...> wrote:
>
> I've just posted a photo of my ATS3A which now resides in a new home.
> The box is one of the Altoids Alternate Enclosures by Doug Hauff at
> American Morse, http://americanmorse.com/index.htm.
>
> Solid!
>
> -- Cam N6GA
>

841. ATS-3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-23 16:36:48 UTC
From: WA5EML@Juno.Com
Topic: 841 Message: 841

I am looking for an ATS-3A either in kit form or built as I just learned about the QRP rig and missed out on the last offering. If you have a kit you have decided not to try and tackle or a "well" built version I am interested.
Regards,
Bob

842. Re: ATS3A in new home

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-24 06:11:49 UTC
From: camqrp
Topic: 837 Message: 842

Pete -

Thanks. I was a little nervous to put drill to box, so I practiced the old carpenter's adage, "Measure 3 times, drill once!"

I started by drilling small pilot holes to check for proper location, then finished the holes with a Unibit. It worked really well on this aluminum billet material.

One place that needed special attention was where a corner of the board meets the corner of the box. I posted a new photo to help ease the verbal explanation. I don't know what the machinist guys call them, but Doug had to leave small columns of material in two diagonally opposite corners of the box to provide a place to tap holes for the screws to secure the lid. The Altoids box has no such issue. I used a moto tool with a small grinding stone to take out enough material so I could get the board where I wanted it, snugged up against the end of the box.

Could be my imagination, but the radio seems to get better signal reports now!

- Cam N6GA

--- In AT_Sprint@yahoogroups.com, "phm7744" <pmeier@...> wrote:
>
> Hi Cam,
>
> I have the same box waiting for me to complete the 3A. Any problems,
> comments or advice to offer about drilling/installing the ATS into the
> box? BTW... nice picture!
>
> Pete WK8S
>

843. FS: ATS-3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-25 16:23:43 UTC
From: duolian99
Topic: 843 Message: 843

I have a constructed and tested ATS-3a for sale. Working fine and have made some QSO's on it on 20m already. Contact me by e-mail for details if interested. Thanks. 73, Charlie ke2sp

844. RE: [AT_Sprint] FS: ATS-3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-25 19:11:58 UTC
From: Ron Pfeiffer
Topic: 843 Message: 844

Is it in a box?

Ron

845. Re: [AT_Sprint] FS: ATS-3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-25 18:55:04 UTC
From: WA5EML@Juno.Com
Topic: 843 Message: 845
Attachments: 2 described; binary payloads are missing from this source WARC

Charlie (ke2sp),
Very good. I am interested. What are you asking for it? Did you
install it in an Altoids container and use the templets that are in the
manual? Do you have a picture of it in the case? I have an interest in
operating 40 meters. Have you built and tested that tank circuit also?
What kind of rig is that you have in the picture of you on QRZ.com?
Regards,
Bob wa5eml

On Thu, 25 Jan 2007 16:23:43 -0000 "duolian99" <ke2sp@...>
writes:
I have a constructed and tested ATS-3a for sale. Working fine and
have made some QSO's on it on 20m already. Contact me by e-mail for
details if interested. Thanks. 73, Charlie ke2sp

846. ATS-3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-27 13:44:36 UTC
From: wa5eml
Topic: 841 Message: 846

I am still interested in purchasing an ATS-3A either kit or built. I just missed out on the last offering due to a 14 hour lag in e-mail delivery between hotmail and juno.
Regards,
Bob - wa5eml

847. DDS problem?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-27 15:01:09 UTC
From: Richard
Topic: 847 Message: 847

Folks,

I've been working on my ATS-IIIa. It has been a lot of fun. I fired it up and was running through the initial alignment and checks and ran into problems.

I got to the LO offset trim calibration step and found I had no audio.

I am a little limited on test equipment. I do have a friend across town who can help me but I thought I would do what checking I could before I got him involved.

I can see a signal from the reference oscillator if I tune to 50 Mhz on my FT-897D. I am also getting the 1.7V to pin eight of the DDS chip. So I assume that means my reference oscillator is fine.

I went through the voltage checks on the DDS chip.

This is using a digital volt meter with a standard probe (not rf probe). I assume this is correct.

All pins read correct voltages except the following.

Pins 1, 2, 17, 19, 20 all read zero volts.
Pin 3 reads -69 mv.
Pin 16 reads 6 mv.

Also, the voltages at pins 14 and 15 are reading 3.5 volts instead of 3.3 volts. Is this normal?

So, I'm thinking I have a bad DDS chip. Maybe I zapped it with static electricity.

Any thoughts or suggestions?

73,

Richard Dodd
KG4PBG

848. Re: [AT_Sprint] DDS problem?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-27 15:35:39 UTC
From: Joe Rocci
Topic: 847 Message: 848

Richard,

I assume that the MSP430 microcontroller is alive. This is confirmed if the ATS-3A starts up by sending the morse startup message in the headphones. If it appears alive, you can test the DDS by using a general coverage station receiver. Put the ATS-3A near the station receiver receiver and connect a short ("12" or so) wire pickup antenna to the station receiver. Tune the station receiver to the ATS-3A default local oscillator frequency (Flo = Frf - Fif = 14.060-4.915 = 9.145). Turn on the ATS-3A with no band modules connected. The ATS-3a will start up with the DDS generating a constant carrier at about 9.145 MHz. As you push the + & - frequency buttons, the frequency of the DDS should change in the station receiver.

If the micro is alive and there is no output from the DDS, it could be that there is a short or open in one of the 3 circuit traces from the MSP430 micro to the DDS.There could also be a solder bridge under either the DDS or the micro.

I doubt if the chip is blown unless you did something horrible - you'd know if you did. If you destroyed it, you would have had to overvoltage it or possibly put it in backwards., or something else that would make you say dooooh! I doubt if static zapped it.

Joe
W3JDR

----- Original Message -----
From: Richard
To: AT_Sprint@yahoogroups.com
Sent: Saturday, January 27, 2007 10:01 AM
Subject: [AT_Sprint] DDS problem?

Folks,

I've been working on my ATS-IIIa. It has been a lot of fun. I fired
it up and was running through the initial alignment and checks and ran
into problems.

I got to the LO offset trim calibration step and found I had no audio.

I am a little limited on test equipment. I do have a friend across
town who can help me but I thought I would do what checking I could
before I got him involved.

I can see a signal from the reference oscillator if I tune to 50 Mhz
on my FT-897D. I am also getting the 1.7V to pin eight of the DDS
chip. So I assume that means my reference oscillator is fine.

I went through the voltage checks on the DDS chip.

This is using a digital volt meter with a standard probe (not rf probe). I assume this is correct.

All pins read correct voltages except the following.

Pins 1, 2, 17, 19, 20 all read zero volts.
Pin 3 reads -69 mv.
Pin 16 reads 6 mv.

Also, the voltages at pins 14 and 15 are reading 3.5 volts instead of 3.3 volts. Is this normal?

So, I'm thinking I have a bad DDS chip. Maybe I zapped it with static electricity.

Any thoughts or suggestions?

73,

Richard Dodd
KG4PBG

849. Re: [AT_Sprint] DDS problem?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-27 16:41:35 UTC
From: Richard Dodd
Topic: 847 Message: 849

Joe,

Thanks for the reply! No joy on 9.145 Mhz. I didn't hear a thing. I'm double checking all of my solder connections around the microprocessor and the DDS. I hope it is something simple.

73

Richard
KG4PBG

--- Joe Rocci <joe@...> wrote:

> Richard,
>
> I assume that the MSP430 microcontroller is alive.
> This is confirmed if the ATS-3A starts up by sending
> the morse startup message in the headphones. If it
> appears alive, you can test the DDS by using a
> general coverage station receiver. Put the ATS-3A
> near the station receiver receiver and connect a
> short ("12" or so) wire pickup antenna to the
> station receiver. Tune the station receiver to the
> ATS-3A default local oscillator frequency (Flo = Frf
> - Fif = 14.060-4.915 = 9.145). Turn on the ATS-3A
> with no band modules connected. The ATS-3a will
> start up with the DDS generating a constant carrier
> at about 9.145 MHz. As you push the + & - frequency
> buttons, the frequency of the DDS should change in
> the station receiver.
>
> If the micro is alive and there is no output from
> the DDS, it could be that there is a short or open
> in one of the 3 circuit traces from the MSP430 micro
> to the DDS.There could also be a solder bridge under
> either the DDS or the micro.
>
> I doubt if the chip is blown unless you did
> something horrible - you'd know if you did. If you
> destroyed it, you would have had to overvoltage it
> or possibly put it in backwards., or something else
> that would make you say dooooh! I doubt if static
> zapped it.
>
> Joe

> W3JDR
>
>
>
> ----- Original Message -----
> From: Richard
> To: AT_Sprint@yahoogroups.com
> Sent: Saturday, January 27, 2007 10:01 AM
> Subject: [AT_Sprint] DDS problem?
>
>
> Folks,
>
> I've been working on my ATS-IIIa. It has been a
> lot of fun. I fired
> it up and was running through the initial
> alignment and checks and ran
> into problems.
>
> I got to the LO offset trim calibration step and
> found I had no audio.
>
> I am a little limited on test equipment. I do have
> a friend across
> town who can help me but I thought I would do what
> checking I could
> before I got him involved.
>
> I can see a signal from the reference oscillator
> if I tune to 50 Mhz
> on my FT-897D. I am also getting the 1.7V to pin
> eight of the DDS
> chip. So I assume that means my reference
> oscillator is fine.
>
> I went through the voltage checks on the DDS chip.
>
> This is using a digital volt meter with a standard
> probe (not rf
> probe). I assume this is correct.
>
> All pins read correct voltages except the
> following.
>
> Pins 1, 2, 17, 19, 20 all read zero volts.
> Pin 3 reads -69 mv.
> Pin 16 reads 6 mv.
>
> Also, the voltages at pins 14 and 15 are reading
> 3.5 volts instead of

> 3.3 volts. Is this normal?
>
> So, I'm thinking I have a bad DDS chip. Maybe I
> zapped it with static
> electricity.
>
> Any thoughts or suggestions?
>
> 73,
>
> Richard Dodd
> KG4PBG
>
>
>
>

Sucker-punch spam with award-winning protection.
Try the free Yahoo! Mail Beta.
http://advision.webevents.yahoo.com/mailbeta/features_spam.html

850. Re: [AT_Sprint] DDS problem?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-27 22:13:49 UTC
From: John A. Evans - N0HJ
Topic: 847 Message: 850

Richard,

Do you get the morse code annunciation at power up??

72 - john - n0hj

Richard Dodd wrote:
>
> Joe,
>
> Thanks for the reply! No joy on 9.145 Mhz. ......
> 73
>
> Richard
> KG4PBG
>

851. QBSA jerky frequency display on high bands

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-27 22:24:23 UTC
From: Steven Weber
Topic: 847 Message: 851

I finally got a chance to check out the QBSA display update problem.

Turns out if the input frequency to the counter is greater than 6.5532 MHz, the display doesn't always update as quick as it should. 6.5532 MHz is the point where the 16 bit frequency counter overflows and interupts have to be counted. If the counter interupt happens to happen when its checking the A/D converter to see if there is transmit power, it can get corrupted results and think there is power output and freeze the display when it shouldn't.

In thoery, this shouldn't have been a problem and I don't know why it happens. Which is why I didn't notice the problem. The power detect was the last thing I did to the program and at the time I was only concerned that it worked and didn't notice it was affecting the frequency display in a way that it shouldn't.

In anyevent, I figured out a solution - turn off the interupts when it checks the A/D converter count, then turn them back on. Glad that worked, because everything else I tried to fix the problem didn't!

So, if you want to have this problem fixed, send me the MEGA48 chip to reprogram. I'll keep the EEPROM data intact so you won't have to do another re-cal. I'll pay for return postage.

It seems there's a little bit of Murphy in everything we do...
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

852. Re: [AT_Sprint] DDS problem?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-28 00:52:33 UTC
From: Richard Dodd
Topic: 847 Message: 852

John,

Yes I do get the morse code annunciation. Everything
seemed fine up until the local oscillator frequency
trim step.

Thanks,

Richard
KG4PBG

--- "John A. Evans - N0HJ" <jaevans@...> wrote:

> Richard,
>
> Do you get the morse code annunciation at power
> up??
>
> 72 - john - n0hj
>
> Richard Dodd wrote:
> >
> > Joe,
> >
> > Thanks for the reply! No joy on 9.145 Mhz. ......
> > 73
> >
> > Richard
> > KG4PBG
> >
>
>

Want to start your own business?
Learn how on Yahoo! Small Business.
http://smallbusiness.yahoo.com/r-index

853. Re: [AT_Sprint] DDS problem?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-28 01:09:35 UTC
From: Michael McShan
Topic: 847 Message: 853

Hi Richard,

Have you checked U7 (AD9834) carefully? I hate to admit this in public, but if U7 in mounted backwards, then your exact symptoms will result (don't ask me how I know :-)). I also happen to know that mounting it backwards will not destroy it (amazing, huh?).

The microprocessor will check out OK but the LO will not if there is a problem with this IC.

Maybe this will help...

Mike N5JKY
OK City

BTW, yes, mine is working fine now... 80M and 20M modules have been made so only 2 more to go before FYBO.

On Jan 27, 2007, at 6:52 PM, Richard Dodd wrote:

> John,
>
> Yes I do get the morse code annunciation. Everything
> seemed fine up until the local oscillator frequency
> trim step.
>
> Thanks,
>
> Richard
> KG4PBG
>
> --- "John A. Evans - N0HJ" <jaevans@...> wrote:
>
> > Richard,
> >
> > Do you get the morse code annunciation at power
> > up??
> >
> > 72 - john - n0hj
> >
>
>

854. Re: [AT_Sprint] DDS problem?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-28 03:26:44 UTC
From: Richard Dodd
Topic: 847 Message: 854

Joe, John, Michael,

Thanks for your input. Joe, I looked for a long while trying to see any shorts or opens around the DDS chip with no luck at all.

I reheated the lines running between the microprocessor and the DDS chip. Still no difference.

So, I just reheated every pin on both the microprocessor and the DDS chip and yeah! I had a tone on the L.O. adjustment step. I also heard the 9.145Mhz signal on my FT-897D with no band module installed and I could adjust it up and down with the tuning buttons.

I have the 40m band module installed now and tuned. I'm listening to a station right now. I also tried transmitting into a dummy load and the transmitter works too.

Thanks for the assurances about the DDS chip. I was afraid I had zapped it. I was already trying to figure out how I would remove and replace it. I'm so glad I didn't have to.

So, many, many thanks for pointing me in the right direction.

73,

Richard
KG4PBG

--- Michael McShan <n5jky@...> wrote:

> Hi Richard,
>
> Have you checked U7 (AD9834) carefully? I hate to
> admit this in
> public, but if U7 in mounted backwards, then your
> exact symptoms will
> result (don't ask me how I know :-)). I also
> happen to know that
> mounting it backwards will not destroy it (amazing,
> huh?).
>

> The microprocessor will check out OK but the LO will
> not if there is
> a problem with this IC.
>
> Maybe this will help...
>
> Mike N5JKY
> OK City
>
> BTW, yes, mine is working fine now... 80M and 20M
> modules have been
> made so only 2 more to go before FYBO.
>
>
> On Jan 27, 2007, at 6:52 PM, Richard Dodd wrote:
>
> > John,
> >
> > Yes I do get the morse code annunciation.
> Everything
> > seemed fine up until the local oscillator
> frequency
> > trim step.
> >
> > Thanks,
> >
> > Richard
> > KG4PBG
> >
> > --- "John A. Evans - N0HJ" <jaevans@...>
> wrote:
> >
> > > Richard,
> > >
> > > Do you get the morse code annunciation at power
> > > up??
> > >
> > > 72 - john - n0hj
> > >
> >
> >
> >
>

Do you Yahoo!?
Everyone is raving about the all-new Yahoo! Mail beta.
http://new.mail.yahoo.com

855. Re: QBSA jerky frequency display on high bands

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-28 17:04:36 UTC
From: Bruce Beford
Topic: 847 Message: 855

Excellent Steve. Thanks for looking into this. I'll send my two chips back to you for reprogramming.
-Bruce N1RX

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
>
> I finally got a chance to check out the QBSA display update problem.
>
> Turns out if the input frequency to the counter is greater than 6.5532 MHz,
> the display doesn't always update as quick as it should. 6.5532 MHz is the
> point where the 16 bit frequency counter overflows and interupts have to be
> counted. If the counter interupt happens to happen when its checking the
> A/D converter to see if there is transmit power, it can get corrupted
> results and think there is power output and freeze the display when it
> shouldn't.
>
> In thoery, this shouldn't have been a problem and I don't know why it
> happens. Which is why I didn't notice the problem. The power detect was the
> last thing I did to the program and at the time I was only concerned that
> it worked and didn't notice it was affecting the frequency display in a way
> that it shouldn't.
>
> In anyevent, I figured out a solution - turn off the interupts when it
> checks the A/D converter count, then turn them back on. Glad that worked,
> because everything else I tried to fix the problem didn't!
>
> So, if you want to have this problem fixed, send me the MEGA48 chip to
> reprogram. I'll keep the EEPROM data intact so you won't have to do another
> re-cal. I'll pay for return postage.
>

> It seems there's a little bit of Murphy in everything we do...
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://www.qsl.net/kd1jv/
> http://kd1jv.qrpradio.com
>

856. 100% ATS-3(a)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-28 17:38:35 UTC
From: JT Croteau
Topic: 856 Message: 856

I'm curious if anyone finds themselves, or actually are, using their ATS-3 or -3a as their only rig? I just moved back to 1-land and consolidated a lot of stuff in the process and going to take a pure minimalist approach going forward.

At home I will be using an ATS-3 with W1MT's firmware, a ZM-2 tuner, and a random wire. As I also spend a lot of time outdoors, I'm also putting together a portable kit using an ALT tuner and a 51' wire. Both setups will be powered with 1000 mah Lithium-Polymer packs.

I've also decided to change to a 1-land call and submitted my vanity application yesterday. If no one beats me to it, there are no pending applications for it currently, my new call will be N1ESE.

But enough of my rambling, it's just a lazy Sunday here and I'm a bit bored as my ATS-3 is packed up to be mailed tomorrow to W1MT for flashing.

72

--
JT Croteau, W6FO/1 - Manchester, NH

857. Re: [AT_Sprint] 100% ATS-3(a)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-28 18:30:39 UTC
From: James Shrum
Topic: 856 Message: 857
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

858. Re: [AT_Sprint] 100% ATS-3(a)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-28 18:25:45 UTC
From: Joe Rocci
Topic: 856 Message: 858

JT,

I have a few other unfinished projects in the oven almost ready to serve, and once I'm done with them, I was intending to make a little board that plugs into the ATS-3 programming header and powers the rig from a USB connection to a laptop or desktop computer. The idea would be to use a common rig control interface protocol such as the Elecraft K2 uses. With this, you'd get power for the rig from the USB (at least to about a watt or so), computer control of the frequency through the USB, and computer control of the audio level by looping the ATS's audio output into the computer's sound card input. This would also let you apply DSP audio filtering via the computer. Other mods that might accompany this could be to open up the crystal filter and audio bandwidth a little bit so that some digital modes could be copied, and possibly a QRP SSB transmitter to augment the simple CW transmitter in the ATS.

My vision is some sort of very small docking station that the ATS would slip into to form a tiny 'brick" that could be used in conjunction with a laptop in the field or with a desktop computer at home. Of course, you could always take the ATS out of the docking station when you want to do some minimalist radio on the trail.

Joe
W3JDR

----- Original Message -----
From: JT Croteau
To: AT_Sprint@yahoogroups.com
Sent: Sunday, January 28, 2007 12:38 PM
Subject: [AT_Sprint] 100% ATS-3(a)

I'm curious if anyone finds themselves, or actually are, using their ATS-3 or -3a as their only rig? I just moved back to 1-land and consolidated a lot of stuff in the process and going to take a pure minimalist approach going forward.

At home I will be using an ATS-3 with W1MT's firmware, a ZM-2 tuner, and a random wire. As I also spend a lot of time outdoors, I'm also putting together a portable kit using an ALT tuner and a 51' wire. Both setups will be powered with 1000 mah Lithium-Polymer packs.

I've also decided to change to a 1-land call and submitted my vanity application yesterday. If no one beats me to it, there are no pending applications for it currently, my new call will be N1ESE.

But enough of my rambling, it's just a lazy Sunday here and I'm a bit bored as my ATS-3 is packed up to be mailed tomorrow to W1MT for flashing.

72

--
JT Croteau, W6FO/1 - Manchester, NH

859. Re: [AT_Sprint] 100% ATS-3(a)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-28 18:47:08 UTC
From: Joe Rocci
Topic: 856 Message: 859

James,
I just finished building an ATS-3A, and I ran some quick sensitivity tests with the 20M band module. Signals at 0.5uv are easily copied. I'll try to develop some numeric data when I get a chance.

Beware! If you install the link-coupled coils improperly, you'll take a big sensitivity loss, and your input bandwidth will be very broad. If you're experiencing sensitivity problems, take a look at these coils.

Joe
W3JDR

----- Original Message -----
From: James Shrum
To: AT_Sprint@yahoogroups.com
Sent: Sunday, January 28, 2007 1:30 PM
Subject: Re: [AT_Sprint] 100% ATS-3(a)

In fact, I am.
I used to have an FT-857d, but due to lack of time to operate, I sold it off and got out of the hobby for a while.
I built the ATS-3A w/ intent on it being my only rig. I just built a BLT tuner from scratch, and am ordering the kd1jv swr/power meter kit as well.

I've not had it very long and haven't been able to operate as much as I'd like. As of yet, I've still not had any QSO's on it. Last night I could faintly hear a w7 coming back to me, but was unable to copy anything else...
At this point I'm not real certain that my ATS is receiving very well on any band, either that or the bands have been weak.

But, I do look forward to exclusively using this rig.

On 1/28/07, JT Croteau <jt.w6fo@...> wrote:
I'm curious if anyone finds themselves, or actually are, using their
ATS-3 or -3a as their only rig? I just moved back to 1-land and
consolidated a lot of stuff in the process and going to take a pure
minimalist approach going forward.

At home I will be using an ATS-3 with W1MT's firmware, a ZM-2 tuner,
and a random wire. As I also spend a lot of time outdoors, I'm also
putting together a portable kit using an ALT tuner and a 51' wire.
Both setups will be powered with 1000 mah Lithium-Polymer packs.

I've also decided to change to a 1-land call and submitted my vanity
application yesterday. If no one beats me to it, there are no pending
applications for it currently, my new call will be N1ESE.

But enough of my rambling, it's just a lazy Sunday here and I'm a bit bored as my ATS-3 is packed up to be mailed tomorrow to W1MT for flashing.

72

--
JT Croteau, W6FO/1 - Manchester, NH

860. 7 Band Mods

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-29 02:10:24 UTC
From: k2qpn
Topic: 860 Message: 860

I have a new unbuilt ATS-3A kit. I want to ready it for 7 band opertation.

If I change the driver, reference clock, and spur filter, do I have to load the new frimware use the original bands?

Does anyone have a US source for the parts?

Does anyone have a source for new filter circuit boards and parts?

In the spur filter, I am confused by the capacitor values - C38=47p//6p8 C35=8p+4p7 C37=8p+2p2 ??

Any input will be appreciated. I want to get this right the first time.

73 Bob K2QPN

861. Re: [AT_Sprint] 7 Band Mods

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-29 07:53:10 UTC
From: Lutz Bergner
Topic: 860 Message: 861

Hi Bob
Am Montag, den 29.01.2007, 02:10 +0000 schrieb k2qpn:
> I have a new unbuilt ATS-3A kit. I want to ready it for 7 band
> opertation.
>
> If I change the driver, reference clock, and spur filter, do I have to
> load the new frimware use the original bands?
>
As soon as you changed the reference clock, you would have to use the modified firmware. But you had to change the source by yourself because the published version is ATS-3 only - so far, because I do not have a ATS-3A. Of course you could use the original bands as before then . You just do not press the menu button at power-up. As soon as I have some time left I will be going to mod Mikes firmware for 7 Bands. Hope that MCU memory will allow it. I think I like some of its features and it's so well commented ;-) - Thanks Mike.

> Does anyone have a source for new filter circuit boards and parts?
>
You probably had to etch them by yourself at the moment or use scratchboard.

> In the spur filter, I am confused by the capacitor values -
> C38=47p//6p8 C35=8p+4p7 C37=8p+2p2 ??
>
Sorry, I hoped to make it clear. "//" and "+" means the same -> soldering in parallel on the back of the other. SMD chips can be stacked very cleanly. C35 and C37 have 8pF in Original. Simply stack a 4.7pF chip on C35 and a 2.2pF chip on the back of C37 and a 6.8pF chip on the back of C38. I probably should use another notation next time.

General notice:
The 7 band mods have not been tested on an original ATS-3A until now. There could well be (if not too likely) issues with T/R changeover noises on the higher bands. That could be cured - but I don't know.

72s

Lutz, DL2HRP

862. Re: [AT_Sprint] 100% ATS-3(a)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-29 08:16:49 UTC
From: Lutz Bergner
Topic: 856 Message: 862

Hi JT,

I 've been using it 100% for about one year now and am still happy.
Well - there are some monoband kit rigs - SST,Sparrow-17 (QRP-project),
GQ-40 (Hands) but no so called main_station_rig at all - and for one
year now they are all gathering dust.
It never gets boring... There is always a little feature or improvement
it could still have....though there are not many left.

72,s

Lutz

Am Sonntag, den 28.01.2007, 12:38 -0500 schrieb JT Croteau:
> I'm curious if anyone finds themselves, or actually are, using their

863. Sold: ATS3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-26 21:26:03 UTC
From: duolian99
Topic: 863 Message: 863

Thanks to all for the inquiries. The unit has been sold.
73, Charlie ke2sp

864. QBSA slow freq update

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-26 20:56:18 UTC
From: Steven Weber
Topic: 820 Message: 864

I know I should have looked into this earlier, but finally got around to it today.

Turns out that when the input frequency to the counter exceeds 6,5536 MHz, the 16 bit counter overflows and an interupt has to be counted to get the full frequency count. When this happens, the update responce of the display becomes jerky.

Through the process of elimination, I discovered that its the A/D test to see if there is any power output and freeze the display is what is causing the problem.

For the life of me, I can't figure out what the interaction is. Maybe because there shouldn't be any. If there is a solution to this problem, its not going to be easy to find, but I'll keep trying!

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

865. Neep help from the group to order a part please

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-29 16:18:16 UTC
From: Pete Meier
Topic: 847 Message: 865

This may sound feeble but I'm lost trying to order a choke I need.
I'm looking for a couple 47uH molded chokes. The kind that look like blue 1/4 watt resistors. I've installed them in numerous kits (Elecraft and etc.) over the years but never had to order a replacement. Looking at mouser or digikey is overwhelming with too many choices especially since I don't know how to ask (filter) for what I need. The choke will be used to block rf in the transmitter stage (final output power is about same as K2).

Can anyone offer some help here and maybe a suggestion for the best place to order?

Pete WK8S

866. Re: [AT_Sprint] Neep help from the group to order a part please

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-29 16:33:30 UTC
From: JT Croteau
Topic: 847 Message: 866

On 1/29/07, Pete Meier <pmeier@...> wrote:
> Can anyone offer some help here and maybe a suggestion
> for the best place to order?

Silly question Pete but, if you have seen them in Elecraft kits, have you tried contacting Elecraft? Elecraft is real good about stocking and selling components whether you've got an Elecraft rig or not.

--
JT Croteau, W6FO/1 - Manchester, NH

867. Re: [AT_Sprint] Neep help from the group to order a part please

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-29 17:01:29 UTC
From: Michael McShan
Topic: 847 Message: 867

Use Mouser's search engine. I searched for "47µH molded choke" and
quickly got:

http://www.mouser.com/search/ProductDetail.aspx?
R=9250-473virtualkey54200000virtualkey542-9250-473

from a list of 10 (most of which are not stocked or obsolete).
Probably this one will do...

72/73,
Mike N5JKY

On Jan 29, 2007, at 10:18 AM, Pete Meier wrote:

> This may sound feeble but I'm lost trying to order a choke I need.
> I'm looking for a couple 47uH molded chokes. The kind that look
> like blue 1/4 watt resistors. I've installed them in numerous kits
> (Elecraft and etc.) over the years but never had to order a
> replacement. Looking at mouser or digikey is overwhelming with too
> many choices especially since I don't know how to ask (filter) for
> what I need. The choke will be used to block rf in the transmitter
> stage (final output power is about same as K2).
>
> Can anyone offer some help here and maybe a suggestion for the best
> place to order?
>
> Pete WK8S
>

868. Re: [AT_Sprint] Neep help from the group to order a part please

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-29 17:51:52 UTC
From: kb2tqx
Topic: 847 Message: 868

Hello Pete,

Try starting here. This is Mouser's parts filter. I don't know what your current (amps) requirement is or I woul have filtered down to the part for you.

http://www.mouser.com/search/Refine.aspx?Ne=254016+1447464&Ntt=*inductor*&Ntx=mode+matchall&Ns=P_SField&Mkw=inductor&N=1323038%201525871&Ntk=Mouser_Wildcards

72/3,

Dave
KB2TQX

======= At 2007-01-29, 11:18:16 you wrote: =======

> This may sound feeble but I'm lost trying to order a choke I need.
>I'm looking for a couple 47uH molded chokes. The kind that look like blue 1/4 watt resistors. I've installed them in numerous kits (Elecraft and etc.) over the years but never had to order a replacement. Looking at mouser or digikey is overwhelming with too many choices especially since I don't know how to ask (filter) for what I need. The choke will be used to block rf in the transmitter stage (final output power is about same as K2).
>
>Can anyone offer some help here and maybe a suggestion for the best place to order?
>
>Pete WK8S
>
>
>
>Yahoo! Groups Links
>
>
>

= = = = = = = = = = = = = = = = = = = =

kb2tqx
kb2tqx@...
2007-01-29

869. Re: [AT_Sprint] Neep help from the group to order a part please

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-29 17:04:24 UTC
From: W2AGN
Topic: 847 Message: 869

Pete Meier wrote:
> This may sound feeble but I'm lost trying to order a choke I need.
> I'm looking for a couple 47uH molded chokes. The kind that look like blue 1/4 watt resistors. I've installed them in numerous kits (Elecraft and etc.) over the years but never had to order a replacement. Looking at mouser or digikey is overwhelming with too many choices especially since I don't know how to ask (filter) for what I need. The choke will be used to block rf in the transmitter stage (final output power is about same as K2).
>
> Can anyone offer some help here and maybe a suggestion for the best place to order?
>
> Pete WK8S
>

I went to mouser.com, and entered "47uh molded choke" in the search box. Got a few choices, but the one you want is part #542-9230-12 I think. Not terribly overwhelming for this old coot.

_ _ _ _ _
/ \ / \ / \ / \ / \ John L. Sielke
(W)(2)(A)(G)(N) http://w2agn.net
_/ _/ _/ _/ _/ http://www.blurty.com/users/w2agn
check out: http://groups.yahoo.com/group/QRPariahs/

870. Re: 100% ATS-3(a)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-29 21:14:48 UTC
From: aeidenva
Topic: 856 Message: 870

Hi

I built my ATS3 about 18 months ago and since then I have used it (99.7%)as my main rig, even participating in the IOTA contest (EU-135) and in the CQWW contest and several other local Swedish contests and field days. I am very happy with it and I am going to build an ATS 3a soon and I am following the discussion about 7 bands with a lot of interest.

I have tested to work the ATS3 with a rotary encoder and a simple interface to the up and down switches and I think that was an improvement. I am now designing an interface for an encoder combined with a simple keyer and a frequency counter. The keyer is needed as it is not possible to combine a straight key input (from my PC) with a pair of paddles.

In the end of the day, I love this rig.

Anders Eidenvall, SM5EFX

--- In AT_Sprint@yahoogroups.com, "JT Croteau" <jt.w6fo@...> wrote:
>
> I'm curious if anyone finds themselves, or actually are, using their
> ATS-3 or -3a as their only rig?
>
> --
> JT Croteau, W6FO/1 - Manchester, NH
>

871. RE: [AT_Sprint] Re: 100% ATS-3(a)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-29 22:11:46 UTC
From: Kenneth Moorman
Topic: 856 Message: 871

Hi Anders,

How about some more details on the rotary encoder interface to the up/down switches?

Ken, NU4I

-----Original Message-----
From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com] On Behalf Of aeidenva
Sent: Monday, January 29, 2007 4:15 PM
To: AT_Sprint@yahoogroups.com
Subject: [AT_Sprint] Re: 100% ATS-3(a)

Hi

I built my ATS3 about 18 months ago and since then I have used it (99.7%)as my main rig, even participating in the IOTA contest (EU-135) and in the CQWW contest and several other local Swedish contests and field days. I am very happy with it and I am going to build an ATS 3a soon and I am following the discussion about 7 bands with a lot of interest.

I have tested to work the ATS3 with a rotary encoder and a simple interface to the up and down switches and I think that was an improvement. I am now designing an interface for an encoder combined with a simple keyer and a frequency counter. The keyer is needed as it is not possible to combine a straight key input (from my PC) with a pair of paddles.

In the end of the day, I love this rig.

Anders Eidenvall, SM5EFX

872. Re: 100% ATS-3(a)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-30 01:53:06 UTC
From: bantonides
Topic: 856 Message: 872

--- In AT_Sprint@yahoogroups.com, "JT Croteau" <jt.w6fo@...> wrote:
>
> I'm curious if anyone finds themselves, or actually are, using
their
> ATS-3 or -3a as their only rig? I just moved back to 1-land and
> consolidated a lot of stuff in the process and going to take a pure
> minimalist approach going forward.
>
> At home I will be using an ATS-3 with W1MT's firmware, a ZM-2
tuner,
> and a random wire. As I also spend a lot of time outdoors, I'm
also
> putting together a portable kit using an ALT tuner and a 51' wire.
> Both setups will be powered with 1000 mah Lithium-Polymer packs.
>
> I've also decided to change to a 1-land call and submitted my
vanity
> application yesterday. If no one beats me to it, there are no
pending
> applications for it currently, my new call will be N1ESE.
>
> But enough of my rambling, it's just a lazy Sunday here and I'm a
bit
> bored as my ATS-3 is packed up to be mailed tomorrow to W1MT for
> flashing.
>
> 72
>
> --
> JT Croteau, W6FO/1 - Manchester, NH
>
Hi JT,

My Sprint 3 is the only HF rig that I have used in almost a year and
a half. The only other HF rig that I own is Small Wonder Labs SW
40, but haven't used it much since I put the Sprint on the air.

Been QRP only for the past 3 years and really enjoying it.

I recently built the Sprint 3 accessory kit and think it's great
addition to Sprint 3!

My antenna is a 120 ft wire up only 20 ft and an MFJ-16010 tuner. I
mostly use my old Radio Shack straight key from my novice days.

Nothing wrong with the minimalist approach ... it works great for me.

Bart - N9AKF

873. Re: [AT_Sprint] Re: 100% ATS-3(a)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-30 02:23:21 UTC
From: Roland Whitsitt
Topic: 856 Message: 873

Bart, I think that's pretty cool! That being your main rig and all.
73's Roland de n5vwn
----- Original Message -----
From: bantonides
To: AT_Sprint@yahoogroups.com
Sent: Monday, January 29, 2007 5:53 PM
Subject: [AT_Sprint] Re: 100% ATS-3(a)

--- In AT_Sprint@yahoogroups.com, "JT Croteau" <jt.w6fo@...> wrote:
>
> I'm curious if anyone finds themselves, or actually are, using
their
> ATS-3 or -3a as their only rig? I just moved back to 1-land and
> consolidated a lot of stuff in the process and going to take a pure
> minimalist approach going forward.
>
> At home I will be using an ATS-3 with W1MT's firmware, a ZM-2
tuner,
> and a random wire. As I also spend a lot of time outdoors, I'm
also
> putting together a portable kit using an ALT tuner and a 51' wire.
> Both setups will be powered with 1000 mah Lithium-Polymer packs.
>
> I've also decided to change to a 1-land call and submitted my
vanity
> application yesterday. If no one beats me to it, there are no
pending
> applications for it currently, my new call will be N1ESE.
>
> But enough of my rambling, it's just a lazy Sunday here and I'm a
bit
> bored as my ATS-3 is packed up to be mailed tomorrow to W1MT for
> flashing.
>
> 72
>
> --
> JT Croteau, W6FO/1 - Manchester, NH
>
Hi JT,

My Sprint 3 is the only HF rig that I have used in almost a year and
a half. The only other HF rig that I own is Small Wonder Labs SW
40, but haven't used it much since I put the Sprint on the air.

Been QRP only for the past 3 years and really enjoying it.

I recently built the Sprint 3 accessory kit and think it's great addition to Sprint 3!

My antenna is a 120 ft wire up only 20 ft and an MFJ-16010 tuner. I mostly use my old Radio Shack straight key from my novice days.

Nothing wrong with the minimalist approach ... it works great for me.

Bart - N9AKF

874. Re: [AT_Sprint] Neep help from the group to order a part please

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-30 02:41:27 UTC
From: Pete Meier
Topic: 847 Message: 874

I was pretty much in right place on mouser. A little more guidance
never hurts.

Thanks guys for the help.

Pete WK8S

On Jan 29, 2007, at 12:04 PM, W2AGN wrote:

> Pete Meier wrote:
> > This may sound feeble but I'm lost trying to order a choke I need.
> > I'm looking for a couple 47uH molded chokes. The kind that look
> like blue 1/4 watt resistors. I've installed them in numerous kits
> (Elecraft and etc.) over the years but never had to order a
> replacement. Looking at mouser or digikey is overwhelming with too
> many choices especially since I don't know how to ask (filter) for
> what I need. The choke will be used to block rf in the transmitter
> stage (final output power is about same as K2).
> >
> > Can anyone offer some help here and maybe a suggestion for the
> best place to order?
> >
> > Pete WK8S
> >
>
> I went to mouser.com, and entered "47uh molded choke" in the search
> box. Got a
> few choices, but the one you want is part #542-9230-12 I think. Not
> terribly
> overwhelming for this old coot.
>
> ---
> _ _ _ _ _
> / \ / \ / \ / \ / \ John L. Sielke
> (W)(2)(A)(G)(N) http://w2agn.net
> _/ _/ _/ _/ _/ http://www.blurty.com/users/w2agn
> check out: http://groups.yahoo.com/group/QRPariahs/
>
>

875. Building ATS 3A Need a part

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-31 17:43:46 UTC
From: pipesanddrums17
Topic: 875 Message: 875

I started this project and as much as I hate to admit I'm having trouble mounting the Ic's..I have managed to get a couple on but it took hours to do it. My eyes are not handling this project well to say the least. I am using a jeweler's loop but you have to get real close it is an overwhelming job at best. I think that once I get these chips in place the rest will be easier.
I managed to break off one of the legs on U2 which is an SA612A.
I looked on mouser and they do not list this part, at least I can't find it. Anyone know where I can get a replacement?
Thanks
John W2GB

876. Re: [AT_Sprint] Building ATS 3A Need a part

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-31 18:10:14 UTC
From: Petr Ouředník
Topic: 875 Message: 876

John,

I have no pb to get one SA612A from local supplier over here. Tomorrow when I will go for lunch > I will buy one for You and going to send You free of charge. Let me know off topic the address please.

Petr, OK1RP
ATS-3A #?? owner (anybode or Steve already counted pcs of sold ATS? :)

> I managed to break off one of the legs on U2 which is an SA612A.
> I looked on mouser and they do not list this part, at least I can't
> find it. Anyone know where I can get a replacement?
> Thanks
> John W2GB

Petr Ouředník
00420608230010 (private)
indians@...
http://ok1rp.blog.cz (Hamradio)
http://topband.blog.cz (160m)
www.qsl.net/ok1rp

877. Reply to Petr OK1RP -- 40m LC Filter

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-31 18:26:01 UTC
From: Lutz Bergner
Topic: 877 Message: 877

Hi all,

This is an answer to Petrs request to me off list. Very sorry abt the bandwidth but its just impossible to answer him. May be other Europeans are interested too.

Hi Petr,

according to my last experiences - forget about the MURATA 7.02. I do not useit anymore. Not that it would be bad, but a thoroughly tuned 2 section LC filter is far better. I could to believe it at first, but Peter DL2FI made same experiences with the K2 filters.
Take the following values. I made a new simulation for ATS3A.
L3: 22T 0.5mm magnet wire to T37-2. 1T link with thinner magnet wire. Regard the turn sense (sense?).
L4: 22T 0.5mm magnet wire to T37-2 with tap at 10T.
Wind carefully this thick wire can easely break the core. happened to me two times.
C5/C7= 220p//22p (//yellow trimmer)
C6=4.7p
Cut the trace from hot end of L4 to Pin 1 of the connector (RX in)
Connect the tap of L4 to Pin 1 instead.
-20dB BW of this filter is 400-500kHz depending a bit on Q factor of the real assembly.
You may have a spare MURATA 7.02 from me but....ASAP.

72s

Lutz, DL2HRP

878. Re: [AT_Sprint] Building ATS 3A Need a part

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-31 21:26:23 UTC
From: Joe Rocci
Topic: 875 Message: 878

Here is a source for the SA612A:

Digikey part # 568-1204-5-ND
www.digikey.com

A jewelers loupe is the wrong tool for the job. A better tool is a headset magnifier.
Harbor Freight #38896-5VGA; $5.99
www.harborfreight.com

Also need fine-point jewelers tweezers; Harbor Freight also sells these.

When you solder the IC's, start by tinning one PCB corner pad with solder. Next, position the IC on the pads and solder to the corner pin. Fine-tune the position of the IC so that all the pads line up and then solder the opposite corner pin. Now mass-solder all the remaining pins with complete disregard for solder bridges. When you're finished, use solder-wick to wick all the solder off the top of the IC pins. Don't worry that you might have wicked too much off - it's not possible.

Joe
W3JDR

----- Original Message -----
From: pipesanddrums17
To: AT_Sprint@yahoogroups.com
Sent: Wednesday, January 31, 2007 12:43 PM
Subject: [AT_Sprint] Building ATS 3A Need a part

I started this project and as much as I hate to admit I'm having
trouble mounting the Ic's..I have managed to get a couple on but it
took hours to do it. My eyes are not handling this project well to say
the least. I am using a jeweler's loop but you have to get real close
it is an overwhelming job at best. I think that once I get these chips
in place the rest will be easier.
I managed to break off one of the legs on U2 which is an SA612A.
I looked on mouser and they do not list this part, at least I can't
find it. Anyone know where I can get a replacement?
Thanks
John W2GB

879. Re: 100% ATS-3(a)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-31 21:35:10 UTC
From: aeidenva
Topic: 856 Message: 879

--- In AT_Sprint@yahoogroups.com, "Kenneth Moorman" <nu4i@...> wrote:
>
> Hi Anders,
>
> How about some more details on the rotary encoder interface to the
up/down
> switches?
>
> Ken, NU4I

Hello Ken,

I just uploaded the circuit diagram for the encoder interface I used. The encoder shall be of the type with a resting position where both channels are off otherwise one of the outputs up or down will be active and thus there will be a continnous sweep.

In the circuit there are zero ohm resistors, they were added when I made an attempt to make a circuit board for the encoder interface.

The maximum tuning speed when the ATS3 reccognize single pulses is a little bit higher than the frequency sweep speed of the ATS3 itself. If the encoder is turned too quickly, the effective tunig speed will go down.

Good luck
Anders, SM5EFX

880. Re: [AT_Sprint] Building ATS 3A Need a part

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-31 22:09:05 UTC
From: Steven Weber
Topic: 875 Message: 880

> I managed to break off one of the legs on U2 which is an SA612A.

Joe, I have spares of these, send me a SASE and willl give you one.
Ordering one from Digi-Key will cost you close to $15.00 with the $5.00 fee
for less than a $25.00 order and $6 or more for UPS shipping.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

881. I'm not getting exactly what the test procedure specifies on Page 20 of the manual

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-03 17:21:25 UTC
From: Ted W2TAG
Topic: 881 Message: 881

I'm in the check-out phase of building the AT Sprint 3A and not getting exactly what the manual calls out for the reading before L3 is installed.

The procedure on page 20 calls for a voltmeter to be connected between ground and the
Drain of Q4 then to send a string of Dah's while watching the voltmeter. Then the procedure says
the voltmeter should go near the DC supply voltage then slowly decay to zero when I stop sending the Dah's.

I'm using a BK 40 MHz scope to make the readings (I've also used a portable DVM and analog multimeter with similar results) and find that the unit will not start sending until I lift
the scope probe off the Drain of Q4. Once I lift the probe the Dah's start and I can put the probe back on the Drain of Q4 and see the scope trace is at the
supply voltage. When I stop sending the Dah's the Drain voltage decays to zero per procedure. I'm using a new 9 volt battery for the power supply.

Is this a good reading? Should the Dah's start with the scope/meter connected? Has anybody else had this situation?

I've checked all the components on the board for good connections and can't find any problems.

Thanks for your comment on this situation.

Regards,

Ted, W2TAG

882. squeal - still

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-03 23:01:35 UTC
From: aarhus_ca
Topic: 882 Message: 882

Hi

I have still the 'squeal' - very loud - when I first power on the Sprint - WITH a good load ...
Any other ideas please... as it is I have to have the phones off - turn on the rig - turn off /on again to hear the startup..

thanks

John VE3NFK

PS -working lots of stations in the FYBO - a little too unpleasant outside tho' wind snow and COLD ...

883. Re: [AT_Sprint] squeal - still

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-04 02:45:24 UTC
From: Steven Weber
Topic: 882 Message: 883

>I have still the 'squeal' - very loud - when I first power on the
>Sprint - WITH a good load ...

John,
You seem to be the only one to ever have this problem. Send the rig back to
me and I'll try to figure out what its doing.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

884. soldering method for ATS-3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-04 20:06:00 UTC
From: lownslow1601
Topic: 884 Message: 884

I am ready to assemble my ATS-3a kit, but I have been following the discussions on QRP-L regarding the various methods for soldering SMT components. I have assembled two small smt kits (including Steve's Rock Mite audio filter) with no difficulties. I simply placed and soldered each component, one at a time. Now some are suggesting that all of the smt components be mounted with small amounts of solder paste and then the entire pc board is placed in an oven or electric skillet. Gosh, I cringe just to think of it! Have any of you used these techniques? How did it go? If you did not use these techniques, why not?

Thanks and 73, Dave K1YHR.

885. Re: [AT_Sprint] soldering method for ATS-3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-04 20:17:04 UTC
From: Michael Harnage
Topic: 884 Message: 885

I have built 7 ATS rigs using just a small tipped
soldering iron and real skinny solder. It works just
fine.

That said, if I had known that I would build that many
I would go with the method described at Cash Olson's
website:

< http://www.zianet.com/erg/SMT_Soldering.html >

73 de w1mt
mike

--- lownslow1601 <dpackard@...> wrote:

> Now some
> are suggesting that
> all of the smt components be mounted with small
> amounts of solder
> paste and then the entire pc board is placed in an
> oven or electric
> skillet. Gosh, I cringe just to think of it! Have
> any of you used
> these techniques? How did it go? If you did not
> use these
> techniques, why not?
>

Yahoo! Music Unlimited
Access over 1 million songs.
http://music.yahoo.com/unlimited

886. RE: [AT_Sprint] soldering method for ATS-3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-04 20:28:58 UTC
From: Richard Bennett
Topic: 884 Message: 886

Dave,

I built my ATS-3 the old fashioned way, one part at a time. I have seen the toaster oven technique demonstrated, but I don't think I would start on an ATS-3 with this method - I would pick something simpler and get comfortable with it.

de kc0pet, Rick

----- Original Message -----
From: lownslow1601
To: AT_Sprint@yahoogroups.com
Sent: 02/04/2007 2:06:53 PM
Subject: [AT_Sprint] soldering method for ATS-3a

I am ready to assemble my ATS-3a kit, but I have been following the discussions on QRP-L regarding the various methods for soldering SMT components. I have assembled two small smt kits (including Steve's Rock Mite audio filter) with no difficulties. I simply placed and soldered each component, one at a time. Now some are suggesting that all of the smt components be mounted with small amounts of solder paste and then the entire pc board is placed in an oven or electric skillet. Gosh, I cringe just to think of it! Have any of you used these techniques? How did it go? If you did not use these techniques, why not?

Thanks and 73, Dave K1YHR.

887. Re: [AT_Sprint] soldering method for ATS-3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-04 20:28:26 UTC
From: Terry WAØITP
Topic: 884 Message: 887

Hi Dave, K1YHR

I've built an ATS2 and a 3 using a "doofus" hold down. It worked well for soldering with a small tip.. Here's the one I built.
http://www.wa0dx.org/wa0itp/accessories.html#doofus

I no longer solder smds with an iron, I use the electric skillet and heat gun methods with solder paste. They work great, and are rediculously easy... You might want to give them a try.
http://wb9ipa.qrpradio.com/smt/smt.htm
http://www.zianet.com/erg/SMT_Soldering.html

Cash Olsen has the solder paste in small quantities..

So now I'm "frying" one side and and "blow drying" the other .works great

72 73
Terry, WAØITP
http://www.wa0dx.org/wa0itp
http://www.wa0dx.org
http://www.4sqrp.com/

----- Original Message -----
From: lownslow1601
To: AT_Sprint@yahoogroups.com
Sent: Sunday, February 04, 2007 2:06 PM
Subject: [AT_Sprint] soldering method for ATS-3a

I am ready to assemble my ATS-3a kit, but I have been following the discussions on QRP-L regarding the various methods for soldering SMT components. I have assembled two small smt kits (including Steve's Rock Mite audio filter) with no difficulties. I simply placed and soldered each component, one at a time. Now some are suggesting that all of the smt components be mounted with small amounts of solder paste and then the entire pc board is placed in an oven or electric skillet. Gosh, I cringe just to think of it! Have any of you used these techniques? How did it go? If you did not use these techniques, why not?

Thanks and 73, Dave K1YHR.

No virus found in this incoming message.
Checked by AVG Free Edition.
Version: 7.5.432 / Virus Database: 268.17.24/668 - Release Date: 2/4/2007 1:30 AM

888. Re: [AT_Sprint] soldering method for ATS-3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-04 20:35:41 UTC
From: Joe Rocci
Topic: 884 Message: 888

Solder paste is overused for this, and can actually be problematic. If not cleaned thoroughly from under the parts, it can cause signal leakages and sometimes even corrosion and etching away of traces over time. I highly recomment against using it. Also, the heat immersion method can damage components unless the temperature rise & gradient is carefully controlled. The best tools for prototyping are a set of headset magnifiers, a good pair of fine-tipped tweezers, a fine-point temperature controlled soldering iron, and a roll of solderwick. When buying solderwick, DON'T get the type that says "no-clean". It doesn't wick work worth a @*!?. In fact, avoid 'no clean' solder. It doesn't flow as nicely as the regular type.

Whe soldering fine-pitch IC's, mass solder all the pins and then wick off the inevitable solder bridges. Works every time/

Joe
W3JDR
----- Original Message -----
From: lownslow1601
To: AT_Sprint@yahoogroups.com
Sent: Sunday, February 04, 2007 3:06 PM
Subject: [AT_Sprint] soldering method for ATS-3a

I am ready to assemble my ATS-3a kit, but I have been following the discussions on QRP-L regarding the various methods for soldering SMT components. I have assembled two small smt kits (including Steve's Rock Mite audio filter) with no difficulties. I simply placed and soldered each component, one at a time. Now some are suggesting that all of the smt components be mounted with small amounts of solder paste and then the entire pc board is placed in an oven or electric skillet. Gosh, I cringe just to think of it! Have any of you used these techniques? How did it go? If you did not use these techniques, why not?

Thanks and 73, Dave K1YHR.

889. Re: [AT_Sprint] soldering method for ATS-3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-04 21:21:19 UTC
From: Gil Stacy
Topic: 884 Message: 889
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

890. Re: [AT_Sprint] soldering method for ATS-3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-04 21:41:33 UTC
From: Joe Rocci
Topic: 884 Message: 890

Gil,

If you re-read the ATS-3A instructions carefully again, you'll notice that Steve specifically recommends against the use of solder paste.

As to the "mass soldering" technique for fine-pitch parts, I'm not sure if you're telling me it worked for you, or if it didn't. I used to solder these things one pin at a time until I read about this technique. It worked the first time I tried it. Don't worry about wicking off too much solder - you can't do it.

As to cleaning, I like to use a toothbrush or a cut-down "acid brush" and a liberal amount of denatured alcohol (get it at your paint store or hardware store). I hold the board with one corner hanging down and start at the top, redipping my brush in clean alchohol as I go, and letting the alchohol on the board drip anywhere except into my clean diish of alchohol. As the alchohol washes down over the board, it will pick up more flux and it will get more concentrated with flux as it flows downward. You have to keep the brush saturated with clean alchohol as you work toward the bottom. If you have compressed air, you can blow the board dry, otherwise just wave it back and forth until the alchohol completely evaporates.

This technique hasn't failed me in hundreds of parts installed, it needs no special equipment or supplies, and doesn't suffer from too many steps that have to be followed carefully.

Your mileage might vary

Joe
W3JDR

----- Original Message -----
From: Gil Stacy
To: AT_Sprint@yahoogroups.com
Sent: Sunday, February 04, 2007 4:21 PM
Subject: Re: [AT_Sprint] soldering method for ATS-3a

I have built 3 ATS kits, a Micro908, and several smaller smt projects. I have soldered one component at a time using a doofus. Slow as you go is a virtue for me on these kits. I recently built a Digital Dial from KD1JV. I started with fine tweezers, my Hakko iron and fine solder. After 5 resistors, I was back to the doofus. I drink enough coffee in the morning to float a goose and that might have been the problem with just using tweezers. In using the doofus I do not pre-tin the pads. I set the piece, secure the piece with the doofus and careful tack one side, remove the doofus and solder the other side. Pre-tinning, in my experience, creates a convex pad and for me, and it is the dickens to keep the part straight on the pad. YMMV.
Joe, after trying the IC trick you mentioned on the Micro908, flooding with solder then wicking, I wanted to solder to my truck trailer the belt buckle of the fella who recommended the trick with the belt still around his waist. <g> Even after using "flux", I would not recommend that trick unless one observes it being done. Judging just how much

solder to use was my problem and I thought I'd never get it straight with wick. It is easier to describe than to do correctly, but it is a valuable technique for bench work once gets up to speed from what I hear. Unless one is a solder savant, I doubt if its gonna happen on one IC, however. Even with the finest pitched IC on the ATS kits, I can drop the narrow edge of my chisel point on one lead and drag solder from lead to pad neatly. With the occasional bridge, solder wick is helpful. It also pays to look at the schematic because some adjacent pins are connected by a trace so the bridge there is okay.
Joe, you burst my bubble with the caveat on the solder paste. I was ready to try that on my unassembled 3a and docking port. Is there a way to clean the board thoroughly to prevent the problem?
73 Gil NN4CW

891. Re: [AT_Sprint] DDS problem?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-01-27 21:10:00 UTC
From: Karl Larsen
Topic: 847 Message: 891

Richard Dodd wrote:
> Joe,
>
> Thanks for the reply! No joy on 9.145 Mhz. I didn't
> hear a thing. I'm double checking all of my solder
> connections around the microprocessor and the DDS. I
> hope it is something simple.
>
It will be simple but not easy to fix. Check the connections on all
the pins on the computer and DDS chips. If in doubt re-solder. If you
get a bridge between two or more pins use solder wick to suck away the
excess solder. It works easy and quick. Make sure the the 4 pins on the
crystal oscillator are soldered. You will get it going.

73 Karl K5DI

> 73
>
> Richard
> KG4PBG
>
> --- Joe Rocci <joe@...> wrote:
>
>
>> Richard,
>>
>> I assume that the MSP430 microcontroller is alive.
>> This is confirmed if the ATS-3A starts up by sending
>> the morse startup message in the headphones. If it
>> appears alive, you can test the DDS by using a
>> general coverage station receiver. Put the ATS-3A
>> near the station receiver receiver and connect a
>> short ("12" or so) wire pickup antenna to the
>> station receiver. Tune the station receiver to the
>> ATS-3A default local oscillator frequency (Flo = Frf
>> - Fif = 14.060-4.915 = 9.145). Turn on the ATS-3A
>> with no band modules connected. The ATS-3a will
>> start up with the DDS generating a constant carrier
>> at about 9.145 MHz. As you push the + & - frequency
>> buttons, the frequency of the DDS should change in
>> the station receiver.
>>
>> If the micro is alive and there is no output from
>> the DDS, it could be that there is a short or open
>> in one of the 3 circuit traces from the MSP430 micro

>> to the DDS.There could also be a solder bridge under
>> either the DDS or the micro.
>>
>> I doubt if the chip is blown unless you did
>> something horrible - you'd know if you did. If you
>> destroyed it, you would have had to overvoltage it
>> or possibly put it in backwards., or something else
>> that would make you say dooooh! I doubt if static
>> zapped it.
>>
>> Joe
>> W3JDR
>>
>>
>>
>> ----- Original Message -----
>> From: Richard
>> To: AT_Sprint@yahoogroups.com
>> Sent: Saturday, January 27, 2007 10:01 AM
>> Subject: [AT_Sprint] DDS problem?
>>
>>
>> Folks,
>>
>> I've been working on my ATS-IIIa. It has been a
>> lot of fun. I fired
>> it up and was running through the initial
>> alignment and checks and ran
>> into problems.
>>
>> I got to the LO offset trim calibration step and
>> found I had no audio.
>>
>> I am a little limited on test equipment. I do have
>> a friend across
>> town who can help me but I thought I would do what
>> checking I could
>> before I got him involved.
>>
>> I can see a signal from the reference oscillator
>> if I tune to 50 Mhz
>> on my FT-897D. I am also getting the 1.7V to pin
>> eight of the DDS
>> chip. So I assume that means my reference
>> oscillator is fine.
>>
>> I went through the voltage checks on the DDS chip.
>>
>> This is using a digital volt meter with a standard
>> probe (not rf

>> probe). I assume this is correct.
>>
>> All pins read correct voltages except the
>> following.
>>
>> Pins 1, 2, 17, 19, 20 all read zero volts.
>> Pin 3 reads -69 mv.
>> Pin 16 reads 6 mv.
>>
>> Also, the voltages at pins 14 and 15 are reading
>> 3.5 volts instead of
>> 3.3 volts. Is this normal?
>>
>> So, I'm thinking I have a bad DDS chip. Maybe I
>> zapped it with static
>> electricity.
>>
>> Any thoughts or suggestions?
>>
>> 73,
>>
>> Richard Dodd
>> KG4PBG
>>
>>
>>
>>
>>
>
>
>
> _____
> Sucker-punch spam with award-winning protection.
> Try the free Yahoo! Mail Beta.
> http://advision.webevents.yahoo.com/mailbeta/features_spam.html
>
>
>
> Yahoo! Groups Links
>
>
>
>
>
>

892. Re: [AT_Sprint] soldering method for ATS-3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-04 21:54:39 UTC
From: Joe Rocci
Topic: 884 Message: 892

More to my previous 2 posts:

It escaped me until just now that some folks might be using PC boards that don't have a solder mask. My method assumes a professionally fabricated PCB with a properly designed mask that flows in between all the solder pads, otherwise all bets are off.

Joe
W3JDR

----- Original Message -----
From: Joe Rocci
To: AT_Sprint@...m
Sent: Sunday, February 04, 2007 4:41 PM
Subject: Re: [AT_Sprint] soldering method for ATS-3a

☐

Gil,

If you re-read the ATS-3A instructions carefully again, you'll notice that Steve specifically recommends against the use of solder paste.

As to the "mass soldering" technique for fine-pitch parts, I'm not sure if you're telling me it worked for you, or if it didn't. I used to solder these things one pin at a time until I read about this technique. It worked the first time I tried it. Don't worry about wicking off too much solder - you can't do it.

As to cleaning, I like to use a toothbrush or a cut-down "acid brush" and a liberal amount of denatured alcohol (get it at your paint store or hardware store). I hold the board with one corner hanging down and start at the top, redipping my brush in clean alchohol as I go, and letting the alchohol on the board drip anywhere except into my clean diish of alchohol. As the alchohol washes down over the board, it will pick up more flux and it will get more concentrated with flux as it flows downward. You have to keep the brush saturated with clean alchohol as you work toward the bottom. If you have compressed air, you can blow the board dry, otherwise just wave it back and forth until the alchohol completely evaporates.

This technique hasn't failed me in hundreds of parts installed, it needs no special equipment or supplies, and doesn't suffer from too many steps that have to be followed carefully.

Your mileage might vary

Joe
W3JDR

----- Original Message -----
From: Gil Stacy
To: AT_Sprint@yahoogroups.com

Sent: Sunday, February 04, 2007 4:21 PM
Subject: Re: [AT_Sprint] soldering method for ATS-3a

I have built 3 ATS kits, a Micro908, and several smaller smt projects. I have soldered one component at a time using a doofus. Slow as you go is a virtue for me on these kits. I recently built a Digital Dial from KD1JV. I started with fine tweezers, my Hakko iron and fine solder. After 5 resistors, I was back to the doofus. I drink enough coffee in the morning to float a goose and that might have been the problem with just using tweezers. In using the doofus I do not pre-tin the pads. I set the piece, secure the piece with the doofus and careful tack one side, remove the doofus and solder the other side. Pre-tinning, in my experience, creates a convex pad and for me, and it is the dickens to keep the part straight on the pad. YMMV.
Joe, after trying the IC trick you mentioned on the Micro908, flooding with solder then wicking, I wanted to solder to my truck trailer the belt buckle of the fella who recommended the trick with the belt still around his waist. <g> Even after using "flux", I would not recommend that trick unless one observes it being done. Judging just how much solder to use was my problem and I thought I'd never get it straight with wick. It is easier to describe than to do correctly, but it is a valuable technique for bench work once gets up to speed from what I hear. Unless one is a solder savant, I doubt if its gonna happen on one IC, however. Even with the finest pitched IC on the ATS kits, I can drop the narrow edge of my chisel point on one lead and drag solder from lead to pad neatly. With the occasional bridge, solder wick is helpful. It also pays to look at the schematic because some adjacent pins are connected by a trace so the bridge there is okay.
Joe, you burst my bubble with the caveat on the solder paste. I was ready to try that on my unassembled 3a and docking port. Is there a way to clean the board thoroughly to prevent the problem?
73 Gil NN4CW

893. Re: [AT_Sprint] soldering method for ATS-3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-04 22:42:23 UTC
From: Gil Stacy
Topic: 884 Message: 893
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

894. ATS3a and T-1 tuner inside metal clipboard

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-04 22:46:00 UTC
From: Roland Whitsitt
Topic: 894 Message: 894

I just posted a couple of photos of the sprint and T-1 tuner inside a small metal clipboard. The idea being that while going about my job, I can toss a wire anywhere and work stealth ops! The labels are kept off intentionally. I don't want to stand out to much.
de N5VWN

895. RE: [AT_Sprint] ATS3a and T-1 tuner inside metal clipboard

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-05 03:15:26 UTC
From: Richard Bennett
Topic: 894 Message: 895

The metal clipboard is a great idea for an enclosure even for a non-stealth application.
Thanks.

de kc0pet, Rick

----- Original Message -----
From: Roland Whitsitt
To: AT_Sprint@yahoogroups.com
Sent: 02/04/2007 4:46:27 PM
Subject: [AT_Sprint] ATS3a and T-1 tuner inside metal clipboard

I just posted a couple of photos of the sprint and T-1 tuner inside a
small metal clipboard. The idea being that while going about my job,
I can toss a wire anywhere and work stealth ops! The labels are kept
off intentionally. I don't want to stand out to much.
de N5VWN

896. Re: [AT_Sprint] ATS3a and T-1 tuner inside metal clipboard

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-05 03:22:26 UTC
From: Terry WAØITP
Topic: 894 Message: 896

Hi Roland,
Great idea for an enclosure. I'm unfamiliar with that style of clipboard. It looks more like an aluminum box with a piano hinged lid. Who sells them?
72 73
Terry, WAØITP
http://www.wa0dx.org/wa0itp
http://www.wa0dx.org
http://www.4sqrp.com/

----- Original Message -----
From: Roland Whitsitt
To: AT_Sprint@yahoogroups.com
Sent: Sunday, February 04, 2007 4:46 PM
Subject: [AT_Sprint] ATS3a and T-1 tuner inside metal clipboard

I just posted a couple of photos of the sprint and T-1 tuner inside a
small metal clipboard. The idea being that while going about my job,
I can toss a wire anywhere and work stealth ops! The labels are kept
off intentionally. I don't want to stand out to much.
de N5VWN

No virus found in this incoming message.
Checked by AVG Free Edition.
Version: 7.5.432 / Virus Database: 268.17.24/668 - Release Date: 2/4/2007 1:30 AM

897. Re: [AT_Sprint] ATS3a and T-1 tuner inside metal clipboard

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-05 04:00:46 UTC
From: Roland Whitsitt
Topic: 894 Message: 897

OFFICE MAX!
----- Original Message -----
From: Terry WAØITP
To: AT_Sprint@yahoogroups.com
Sent: Sunday, February 04, 2007 7:22 PM
Subject: Re: [AT_Sprint] ATS3a and T-1 tuner inside metal clipboard

Hi Roland,
Great idea for an enclosure. I'm unfamiliar with that style of clipboard. It looks more like an aluminum box with a piano hinged lid. Who sells them?
72 73
Terry, WAØITP
http://www.wa0dx.org/wa0itp
http://www.wa0dx.org
http://www.4sqrp.com/

----- Original Message -----
From: Roland Whitsitt
To: AT_Sprint@yahoogroups.com
Sent: Sunday, February 04, 2007 4:46 PM
Subject: [AT_Sprint] ATS3a and T-1 tuner inside metal clipboard

I just posted a couple of photos of the sprint and T-1 tuner inside a small metal clipboard. The idea being that while going about my job, I can toss a wire anywhere and work stealth ops! The labels are kept off intentionally. I don't want to stand out to much.
de N5VWN

No virus found in this incoming message.
Checked by AVG Free Edition.
Version: 7.5.432 / Virus Database: 268.17.24/668 - Release Date: 2/4/2007 1:30 AM

898. Re: [AT_Sprint] ATS3a and T-1 tuner inside metal clipboard

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-05 13:57:25 UTC
From: Terry WAØITP
Topic: 894 Message: 898

Thanx, I'll check it out...
72 73
Terry, WAØITP
http://www.wa0dx.org/wa0itp
http://www.wa0dx.org
http://www.4sqrp.com/

----- Original Message -----
From: Roland Whitsitt
To: AT_Sprint@yahoogroups.com
Sent: Sunday, February 04, 2007 10:00 PM
Subject: Re: [AT_Sprint] ATS3a and T-1 tuner inside metal clipboard

OFFICE MAX!
----- Original Message -----
From: Terry WAØITP
To: AT_Sprint@yahoogroups.com
Sent: Sunday, February 04, 2007 7:22 PM
Subject: Re: [AT_Sprint] ATS3a and T-1 tuner inside metal clipboard

Hi Roland,
Great idea for an enclosure. I'm unfamiliar with that style of clipboard. It looks more like an aluminum box with a piano hinged lid. Who sells them?
72 73
Terry, WAØITP
http://www.wa0dx.org/wa0itp
http://www.wa0dx.org
http://www.4sqrp.com/

----- Original Message -----
From: Roland Whitsitt
To: AT_Sprint@yahoogroups.com
Sent: Sunday, February 04, 2007 4:46 PM
Subject: [AT_Sprint] ATS3a and T-1 tuner inside metal clipboard

I just posted a couple of photos of the sprint and T-1 tuner inside a
small metal clipboard. The idea being that while going about my job,
I can toss a wire anywhere and work stealth ops! The labels are kept
off intentionally. I don't want to stand out to much.
de N5VWN

No virus found in this incoming message.
Checked by AVG Free Edition.
Version: 7.5.432 / Virus Database: 268.17.24/668 - Release Date: 2/4/2007 1:30 AM

No virus found in this incoming message.
Checked by AVG Free Edition.
Version: 7.5.432 / Virus Database: 268.17.24/668 - Release Date: 2/4/2007 1:30 AM

899. ATS-3a Build Post Mortem

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-06 17:40:31 UTC
From: duolian99
Topic: 899 Message: 899

I recently built an ATS-3a and ran into a number of challenges, as have others on the list. In general, though, things went reasonably well because the documentation was quite good. My main problem and frustration came from seeing my fading abilities (or disabilities, as the case may be). I used to do this for a living before I retired (about 7 years ago) and assumed I could build and test a board of this size in about 3 hours. Alas, that was not to be. I ended up taking over 7 hours to build, in several 1.5 hour sittings and another three hrs to debug - the main board only. Then another 1.5 hrs per module. Aaarrgh! My main obstacles were lack of patience, fading eyesight, and 'brain fade'. After building the board I checked it out carefully (I thought) with a 5x loupe. All seemed in order. Then upon applying power the '20m' message rallied forth and 'high hopes' ensued - prematurely , alas. My first discovery was that I couldn't get the right voltages to the switch Q4 - or out of the micro. hmmm. then pushing the MENU switch only got me two modes. hmm. after checking voltages around the micro I noticed that they would all drop to about 2v when I pushed any button or the paddle. Now what? the resistor pack was in right - I rechecked it. after much peering through the loupe at all angles of light I finally discovered that pin 2 of the micro - Vdd - showed light underneath - even thought it had been 'soldered'. After re-soldering it and reinspecting the whole board again the micro and TX section was working. Now on to the RX. My first test was to touch a test lead to U2 pin 1 expecting to hear some noise. Nothing. Twisting the board I heard crackling noises. Aha. another bad solder joint. Using a plastic tuning tool I pressed on various pins of U2 and U3. More crackling. Peering again with the loupe I found that pins 2 and 3 - which looked soldered - weren't. Damn. How many times I looked and didn't see. Re-soldering these now had the tail end of the receiver working. Now touching the test lead to pin 1 of U1 no noise. Or very little. couldn't find anything wrong. Later. Now on to the 20m module. Installed it and connected the output to a power meter. Test mode. key down. Nothing! what. Now I discovered there was no voltage to the finals. poking and wiggling I discovered it was C48. Apparently the volts were'nt getting from the bottom of the board to the top via the 'thru-hole' which apparenty wasn't plated thru. I applied heat to the pins - one by one - wiggled them until the cap lifted up a bit, then used wick to clean the pins and reflowed solder until I could see it well up a bit at the top of the board. (I ran into this problem with C54 too. At that point I decided to reposition all the electrolytic caps so that they were up a bit from the board so that I could see if the solder flowed through. I would recommend putting a toothpick under them when mounting - befor soldering - to ensure that they are up enough so

that you can see the solder flow through). Now the TX was working. Hooking up an antenna I tried peaking the RX input circuit. Could barely hear any difference. Tried tuning about. nothing . all of a sudden I came across W1AW code practice and it was blasting through. I peaked the cap on it. I then realized the reason for the lack of noise was the extremely narrow RX bandwidth. I then continued tuning around and found a few other signals. I then ran experiments to check out the tuning by key entry. Very slick. Nice selectivity. Low noise. Then I decided to sweep the band from 14060 down to 14000. Aiiieeee! It took over 732 minutes! I couldn't believe it was that slow. WHY? How could one possibly use this for general purpose? I ran some experiments with my MFJ Cub (one turn across band and 500 hz BW) and found that I could scan the same band in about 20 - 30 seconds and spot signals without passing them. And under current low activity band condx that's about how fast I'd want to do a 'look-see'. Perhaps someone holed up in a 'snow cave' - as somebody on one of these lists said (FYBO contest?) would be patient enough but not me... Anyway, since I was having an obvious 'bad hair day' I put the rig up for sale and sold it. Big mistake in hind sight. Oh well, I guess I'll have to build another - maybe using the paste and hotplate approach. I got to like it after playing with it the few extra days I had it because the buyer wasn't a kit builder and guilt drove me to build the other plug-ins - which I also didn't want to do. My left thumb still hurts and circulation is just coming back after squeezing down on those tiny coils. But I did manage to do the 80 m rx coil and link with no overlaps - every 3 or 4 turns I would stop and squeeze the turns together tight - it all just fits. and I particularly hated doing the 80m board - haven't been on 80m since 1954 with my HB 6AG7 rig and 3725 xtal and modified 'Midwest' receiver- but then discovered that I could work out of town, even out of state on 40m with an ARC-5 - man, did those things tune slow too, I think I wore out my fingerprints on the small knurled knob) and never looked back. Now that I did it once ... Hopefully the next version will have more and/or higher bands and faster tuning etc. My prefered bands would be 40, 20, and 15m. 10m would be nice but doesn't seem likely. 30 and 17 would be nice. 80 and 160m would be of no interest to me (antenna limitations). But it is a clever little rig. Great design job. Now the long wait... again..
73, Charlie ke2sp ps I was going to list the TX power measurements but lost them. From memory I recall over 3W on 20m and 30m, but only about 2.5W on 80 and 40 with about 8.5v key down.

900. Re: ATS-3a Build Post Mortem

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-06 23:29:51 UTC
From: Bruce Beford
Topic: 899 Message: 900

Well charlie. Quite a story.

Too bad you sold the rig. Most (all) of your troubles seemed to come down to soldering issues. This has been true with other reports of trouble. Good that you had the patience to work through the problems though. Shows tenacity. The built time you reported is about right. Something this small and delicate takes time and patience.

The tuning speed you reported- "over 732 minutes"- or over 12 HOURS to go 60 KHz. is NOT normal. When I power my '3a up, it starts at 7.030. If I hold the down button in, I am at the bottom of the band in exactly one minute. Thats 30 KHz/minute. This is a good tuning speed for a radio with the narrow filter this one has.

Sorry you had so much trouble. But your experience is not typical. Most of the several hundred sold have gone together fine. Some have had construction problems along the way, but I think all have worked well in the end. Hopefully, you will eventually get to try another, and have a better experience.
73,
Bruce N1RX

901. Re: [AT_Sprint] Re: ATS-3a Build Post Mortem

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-06 23:37:40 UTC
From: Gil Stacy
Topic: 899 Message: 901
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

902. Hi all

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-07 06:02:26 UTC
From: Dominic Baines
Topic: 902 Message: 902

Hi all,

Just to introduce myself to the group.

Dominic Baines, M1KTA so from UK currently contracting for 6 months to a year as a DBA in Switzerland so will be operating as HB9/M1KTA shortly. Only managing maybe 10wpm at present but improving.

As I have time on my hands (XYL has stayed at home) in the evenings I am getting around to the kits I have collected over the years and wer unfinished.

My construction experience recently includes:

Whole suite of rockmites 10m - 80m
Couple of tenna dippers
N2PK VNA
IW3HEV analyser
SDR V4, v6 and v7 for 20m and 40m/80m
SW20+
OXO
Pixie
Tuna Tin II
Lots of VSWR, ATU, test kit etc...

So a 'splattering' of SMT experience amongst more convention construction.

I have an as yet unmade ATS-3 and was reading some of the group posts. Questions:

1. Should I modify it or build it vanilla?
2. Can the ATS-3 be made as an ATS-3a?
3. What are the differences?

Current operating rig history has been:

FT707 now sold
FT897 too big for portable
FT817 HAs everything but then I found these...
Rockmite 20m, 40m and SW20+

73

Dom
M1KTA

Dominic Baines
Contract DBA and Licenced Radio Amateur
http://homepage.ntlworld.com/dominic.baines/M1KTA/

New Yahoo! Mail is the ultimate force in competitive emailing. Find out more at the Yahoo! Mail Championships. Plus: play games and win prizes.

903. ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-07 07:52:32 UTC
From: Vojtěch Bubník
Topic: 903 Message: 903

Hi gang.

I am enjoying QRP digital communication and my goal is to build as small as possible portable setup. I wrote a multimode software for Pocket PC. Unfortunately this software needs an SSB transceiver to transmit digital modes. For those that did not hear about this software yet, it is freely downloadable from http://pocketdigi.sourceforge.net and there is a desktop windows version for playing with.

I contemplated about using DDS to modulate digital signals directly. It is possible to modulate RTTY, MFSK16 or olivia by DDS for sure. I am not able to design the whole TRX myself, but I am able to modify firmware of an existing device. The natural choice for my experiments is DSW by Smallwonderlabs, KX1 by Elecraft or ATS3 by Steve Weber. I decided to tinker with ATS3 because it's firmware is open.

The page of W1MT tells that I need either a TI MSP-FET430X110 board or Olimex MSP430-JTAG cable. I own a programmer Presto by www.asix.cz, which I bought for programming PICs. The manual says that it is able to program parts with JTAG interface, if the compiled program is provided in the CVF or XSVF format. Will that work?

It seems the current batch of kits sold out. Is there a plan to run another batch? Someone willing to sell his kit, built or unbuilt?

73, Vojtech OK1IAK

904. Re: [AT_Sprint] Hi all

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-07 08:39:35 UTC
From: Lutz Bergner
Topic: 902 Message: 904

Hi Dom,

Let me answer between the lines....
Am Mittwoch, den 07.02.2007, 06:02 +0000 schrieb Dominic Baines:
>
> 1. Should I modify it or build it vanilla?
As you live in europe like me ,I'd say modify it to have full extent of fun. 40m evening on most and 30m on some days can be real hell with the original version.
Build up the mainboard and one Band vanilla first just to see it works. As you will use it in europe I 'd recommend you to build in a Mosfet-T/R switch and use (e.g.) my narrow 2 section rx_filters. If you chose to do so you have to build up all bandmodules modified as the former BK_diodes_pin gets now the input of the rx filter coming from the T/R switch.
> 2. Can the ATS-3 be made as an ATS-3a?
Yes, you can give it all properties of the ATS-3a without loosing the wideband reception. It is not too difficult. You 'd have to do the following mods:
> 3. What are the differences?
>
1. The major one. Build in a T/R switch from 2 2N7002 ugly style. see photo and schematic in my gallery here in this group (DL2HRP) NO more BC distortion...

2. Improve the match and termination of the IF crystal filter. Two ways to do it. See Michaels W1MT homepage for the narrow band variant (L section) built as "Teepee"
Harry OE6GC did it with small transformers. However the result is a flatter response with less insertion loss that sounds simply great.

3. Incorporate one of the spare BAV90 diodes across U3a 's feedback to have a limiting and avoiding audio distortion in situations with real strong signals around.

4.Rather small corrections to audio response to further improve it. Either you take values from ATS3a schem or look at W1MTs homepage again. OE6GC has an interestig variant of that mod too.

I did them all except Point 4. (planned soon) and will never sell that rig. I am afraid , it already became some kind of obsession to me :-). What do you want more - a great receiver -even here in europe, smooth full BK , RIT, XIT, builtin Keyer, vy low power consumtion at a size of a credit card....

72s

Lutz, DL2HRP

>
>
>
--
iXadmin

---
* Systemadministration
* Netzwerkberatung
* Internetdienstleistungen

Tel.: 034922 66717
Fax.: 034922 66718
mobil: 0175 2631032
VOIP(sipgate): 01801 6666260511
Mail: l.bergner@...

905. Re: [AT_Sprint] ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-07 13:00:38 UTC
From: Joe Rocci
Topic: 905 Message: 905

Vojtech,

While it is possible to use the DDS to directly generate phase modulated signals, it isn't practical because the DDS has no way to limit the rise and fall times of the phase transitions - it can only make instantaneous changes. This would cause the bandwidth of the modulated RF signal to be excessively wide, otherwise known as 'splatter'. There is a method to make a nice clean spectrum with a phase-modulated on-off keyed transmitter, but it involves turning the transmitter off at the end of a bit, making the phase transition, and then turning the transmitter back on for the next bit. The transmitter on and off rise and fall times have to be carefully controlled. They have to be large enough to prevent spectrum spreading but small compared to a bit time. This technique has been written up on the web. search for "Medfer Beacon" for more details.

Joe
W3JDR

----- Original Message -----
From: Vojtich Bubník
To: AT_Sprint@yahoogroups.com ; Leigh@...
Sent: Wednesday, February 07, 2007 2:52 AM
Subject: [AT_Sprint] ATS3 and portable digital modes

Hi gang.

I am enjoying QRP digital communication and my goal is to build as small as possible portable setup. I wrote a multimode software for Pocket PC. Unfortunately this software needs an SSB transceiver to transmit digital modes. For those that did not hear about this software yet, it is freely downloadable from http://pocketdigi.sourceforge.net and there is a desktop windows version for playing with.

I contemplated about using DDS to modulate digital signals directly. It is possible to modulate RTTY, MFSK16 or olivia by DDS for sure. I am not able to design the whole TRX myself, but I am able to modify firmware of an existing device. The natural choice for my experiments is DSW by Smallwonderlabs, KX1 by Elecraft or ATS3 by Steve Weber. I decided to tinker with ATS3 because it's firmware is open.

The page of W1MT tells that I need either a TI MSP-FET430X110 board or Olimex MSP430-JTAG cable. I own a programmer Presto by www.asix.cz, which I bought for programming PICs. The manual says that it is able to program parts with JTAG interface, if the compiled program is provided in the CVF or XSVF format. Will that work?

It seems the current batch of kits sold out. Is there a plan to run another batch? Someone willing to sell his kit, built or unbuilt?

73, Vojtech OK1IAK

906. Re: [AT_Sprint] ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-07 13:29:11 UTC
From: Gil Stacy
Topic: 905 Message: 906
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

907. Re: [AT_Sprint] ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-07 13:40:45 UTC
From: Vojtěch Bubník
Topic: 905 Message: 907

Hi Joe.

Thanks for the info, I am aware that the envelope of PSK31 signal has to be shaped by raised cosine. I even did some simulations to measure IMD if I key a CW transmitter with a simple exp envelope. The IMD was very high.

> There is a method to make a nice clean
> spectrum with a phase-modulated on-off keyed transmitter, but it involves
> turning the transmitter off at the end of a bit, making the phase transition,
> and then turning the transmitter back on for the next bit. The transmitter on
> and off rise and fall times have to be carefully controlled. They have to be
> large enough to prevent spectrum spreading but small compared to a bit time.
> This technique has been written up on the web. search for "Medfer Beacon" for
> more details.

I did study this article. He actually modulates the envelope by PWM, which is more complex then simply key on the signal a bit later after the phase change and switch off a bit sooner before the other phase change.

But anyway, the MFSK16 or RTTY signal has a constant envelope and I am sure that Olivia would work with constant phase envelope too.

73, Vojtech OK1IAK

908. Re: [AT_Sprint] ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-07 13:39:00 UTC
From: Gil Stacy
Topic: 905 Message: 908
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

909. Re: [AT_Sprint] ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-07 13:42:43 UTC
From: Vojtěch Bubník
Topic: 905 Message: 909

Hi Gill,

that is an interesting point.
How about to put a bit of silicon vaseline on the finals and place a bit of brass over the transistors?

73, Vojtech OK1IAK

910. Re: [AT_Sprint] ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-07 14:05:13 UTC
From: Gil Stacy
Topic: 905 Message: 910
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

911. Re: ATS-3a Build Post Mortem

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-07 14:24:08 UTC
From: duolian99
Topic: 899 Message: 911

OOOoopps so that's where the "73" went! No it wasn't 732
minutes but 2 minutes to tune from 14060 down to 14000 (like
yours. but seems long to me)(I get 'bored' waiting thru a 3 minute
beacon cycle too - especially since I'm not hearing any lately!?)
the "73" was the missing part of my ending byline (ie "73, charlie
ke2sp etc") I started typing and it didn't show up so I just
repositioned the cursor and didn't think to look for where it had
been. Anyway, yes you are right - patience and tenacity .
hopefully I will get to build another. Neat little gadget. however,
I did run into another 'challenge' that still outwits me - how do
you get the drill drawing to print out at correct size? everytime I
tried it came out 8" x 10" . Another problem was the drilling of
the altoids box. Since I'm in a 'portable' situation I only have
limited tools and my moto-tool max drill size is 1/8" but my rat-
tail file is bigger so I'm forced to enlarge the hole by pushing
the drill sideways until the rat-tail file will fit in. so the hole
moves from where marked/started. not good. Does anybody know where
one can buy a 1/4" drill bit with a 1/8" shaft. that would work
nicely.
thanks. charlie ke2sp

--- In AT_Sprint@yahoogroups.com, "Bruce Beford" <bruce.beford@...>
wrote:
>
> Well charlie. Quite a story.
>
> Too bad you sold the rig. Most (all) of your troubles seemed to
come
> down to soldering issues. This has been true with other reports of
> trouble. Good that you had the patience to work through the
problems
> though. Shows tenacity. The built time you reported is about
right.
> Something this small and delicate takes time and patience.
>
> The tuning speed you reported- "over 732 minutes"- or over 12
HOURS
> to go 60 KHz. is NOT normal. When I power my '3a up, it starts at
> 7.030. If I hold the down button in, I am at the bottom of the
band
> in exactly one minute. Thats 30 KHz/minute. This is a good tuning
> speed for a radio with the narrow filter this one has.
>
> Sorry you had so much trouble. But your experience is not typical.
> Most of the several hundred sold have gone together fine. Some

have
> had construction problems along the way, but I think all have
worked
> well in the end. Hopefully, you will eventually get to try
another,
> and have a better experience.
> 73,
> Bruce N1RX
>

912. Re: [AT_Sprint] Re: ATS-3a Build Post Mortem

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-07 14:52:08 UTC
From: Terry WAØITP
Topic: 899 Message: 912

Hi Charlie, KE2SP

Perhaps a trip to Harbor Freight for one of their punch sets is possible, if there's a store near you. Otherwise most hardware stores have small round files for re-sizing those 1/8" holes. It may also have a tapered reamer that will fit. I use one often for enlarging holes in Altoids or Whitmans. I dont try to power it, just twist it by hand. Another option is to buy a tapered grinding stone if your moto tool is a Dremel type with a collet.

Here's my ATS3 page. http://www.wa0dx.org/wa0itp/ats3.html It has some hints, hope you find them helpful. If you'd label, pse let me know.

Good luck.

72 73
Terry, WAØITP
http://www.wa0dx.org/wa0itp
http://www.wa0dx.org
http://www.4sqrp.com/

----- Original Message -----
From: duolian99
To: AT_Sprint@yahoogroups.com
Sent: Wednesday, February 07, 2007 8:24 AM
Subject: [AT_Sprint] Re: ATS-3a Build Post Mortem

OOOoopps so that's where the "73" went! No it wasn't 732 minutes but 2 minutes to tune from 14060 down to 14000 (like yours. but seems long to me)(I get 'bored' waiting thru a 3 minute beacon cycle too - especially since I'm not hearing any lately!?) the "73" was the missing part of my ending byline (ie "73, charlie ke2sp etc") I started typing and it didn't show up so I just repositioned the cursor and didn't think to look for where it had been. Anyway, yes you are right - patience and tenacity . hopefully I will get to build another. Neat little gadget. however, I did run into another 'challenge' that still outwits me - how do you get the drill drawing to print out at correct size? everytime I tried it came out 8" x 10" . Another problem was the drilling of the altoids box. Since I'm in a 'portable' situation I only have limited tools and my moto-tool max drill size is 1/8" but my rat-tail file is bigger so I'm forced to enlarge the hole by pushing the drill sideways until the rat-tail file will fit in. so the hole moves from where marked/started. not good. Does anybody know where one can buy a 1/4" drill bit with a 1/8" shaft. that would work nicely.
thanks. charlie ke2sp

--- In AT_Sprint@yahoogroups.com, "Bruce Beford" <bruce.beford@...>
wrote:
>
> Well charlie. Quite a story.
>
> Too bad you sold the rig. Most (all) of your troubles seemed to
come
> down to soldering issues. This has been true with other reports of
> trouble. Good that you had the patience to work through the
problems
> though. Shows tenacity. The built time you reported is about
right.
> Something this small and delicate takes time and patience.
>
> The tuning speed you reported- "over 732 minutes"- or over 12
HOURS
> to go 60 KHz. is NOT normal. When I power my '3a up, it starts at
> 7.030. If I hold the down button in, I am at the bottom of the
band
> in exactly one minute. Thats 30 KHz/minute. This is a good tuning
> speed for a radio with the narrow filter this one has.
>
> Sorry you had so much trouble. But your experience is not typical.
> Most of the several hundred sold have gone together fine. Some
have
> had construction problems along the way, but I think all have
worked
> well in the end. Hopefully, you will eventually get to try
another,
> and have a better experience.
> 73,
> Bruce N1RX
>

No virus found in this incoming message.
Checked by AVG Free Edition.
Version: 7.5.432 / Virus Database: 268.17.29/673 - Release Date: 2/6/2007 5:52 PM

913. Re: [AT_Sprint] ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-07 15:08:57 UTC
From: Vojtěch Bubník
Topic: 905 Message: 913

Gill,

my concept is very different. N4QA drives the DDS by a parallel port of a desktop PC directly and lets a RTTY software toggle the FSK pin of the DDS. That means lot of ugly hardware changes and I am not sure whether the TRX will be usable standalone after the changes are done.

I want to extend ATS3 firmware and use the keyer socket as a serial line for programming DDS and keying. The software that will control ATS3 will be PocketDigi on a Pocket PC device.

73, Vojtech OK1IAK

914. Re: [AT_Sprint] ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-07 15:27:01 UTC
From: Joe Rocci
Topic: 905 Message: 914

Vojtech,

I think you're going to have a very wide spectrum unless you find a way to limit the slew-rate of the frequency transitions. Has N4QA published a spectrum plot of the output?

Joe
W3JDR

----- Original Message -----
From: Vojtich Bubník
To: AT_Sprint@yahoogroups.com
Sent: Wednesday, February 07, 2007 10:08 AM
Subject: Re: [AT_Sprint] ATS3 and portable digital modes

Gill,

my concept is very different. N4QA drives the DDS by a parallel port of a desktop PC directly and lets a RTTY software toggle the FSK pin of the DDS. That means lot of ugly hardware changes and I am not sure whether the TRX will be usable standalone after the changes are done.

I want to extend ATS3 firmware and use the keyer socket as a serial line for programming DDS and keying. The software that will control ATS3 will be PocketDigi on a Pocket PC device.

73, Vojtech OK1IAK

915. Re: [AT_Sprint] ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-07 15:42:36 UTC
From: Gil Stacy
Topic: 905 Message: 915
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

916. Re: [AT_Sprint] ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-07 15:56:28 UTC
From: Joe Rocci
Topic: 905 Message: 916

Gil,

If that plot was taken through a PC sound card software, then it's misleading. In order for the signal to get into the sound card, it has to go through the receiver's IF filter. Therefore the IF bandwidth of the receiver will determine what the wide-band spectrum of the transmitter looks like. The bandwidth could have been (and probably was) much wider than what is displayed.

Joe
W3JDR

----- Original Message -----
From: Gil Stacy
To: AT_Sprint@yahoogroups.com
Sent: Wednesday, February 07, 2007 10:42 AM
Subject: Re: [AT_Sprint] ATS3 and portable digital modes

I think you're going to have a very wide spectrum unless you find a way to limit the slew-rate of the frequency transitions. Has N4QA published a spectrum plot of the output?

Joe,
There's a plot in the second link I posted this a.m. Scroll down the page.
73 Gil NN4CW

917. Re: [AT_Sprint] Re: ATS-3a Build Post Mortem

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-07 16:08:29 UTC
From: Steven Weber
Topic: 899 Message: 917

>I did run into another 'challenge' that still outwits me - how do
>you get the drill drawing to print out at correct size? everytime I
>tried it came out 8" x 10" . Another problem was the drilling of

You have to open and print the file with MS Paint. Paint will print to
scale. Most graphic viewers scale to fit page. There maybe other graphic
programs which will print to scale, like photo editing programs, but nearly
everyone has Paint as part of the windows operating system.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

918. Re: [AT_Sprint] ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-07 16:47:16 UTC
From: Steven Weber
Topic: 905 Message: 918

While the DDS will change its output frequency nearly instantaneously, it does it in a phase contiunous mannor. Because of this and the relatively small frequency shift for TTY, I don't think there is much of a problem.

As for PSK, instead of doing abrupt 180 degree phase changes, I would think you could do it in smaller steps and simulate the cosine phase change rate. A simple look up table could do this.

Really, the main problem with using the ATS rigs with digital modes is that the PA isn't meant to be used in continues duty output. One possible way around that is to run the rig with reduced supply voltage/ power output and drive a little outboard linear, maybe something as simple as a single IRF510 or 511.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

919. Re: [AT_Sprint] Re: ATS-3a Build Post Mortem

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-07 17:15:05 UTC
From: Dominic Baines
Topic: 899 Message: 919

Charlie hopefully I can be of some help. I cannot help with the drill bit. Take the altoid tin and mark up where you want the holes first. Then take a small nail and a piece of wood and hold the tin in a vice or similar and make a mark for the drill bit. You do not have to put the nail right through justenough for the drill bit to stay put. If you have a punch or similar even better. If you need a larger hole then mark the edges and file a larger hole using the two holes as the outer edges.

I do this and every time I get perfectly placed holes for my altoid projects using a set of needle files and a 3mm drill bit. To fit a BNC I make 4 evenly spaced hole and file between them. Patience is important if you want an acurate hole.

Another option I have used is to fill the tin with water (yes water!) and freeze it. The tin when frozen it is easy to drill the sides.

I mark the hole locations on the tin using a CD writing pen.

I have probably 15 or more altoids tin projects.

73

Dom
M1KTA
duolian99 <ke2sp@...> wrote:
..... Another problem was the drilling of
the altoids box. Since I'm in a 'portable' situation I only have
limited tools and my moto-tool max drill size is 1/8" but my rat-
tail file is bigger so I'm forced to enlarge the hole by pushing
the drill sideways until the rat-tail file will fit in. so the hole
moves from where marked/started. not good. Does anybody know where
one can buy a 1/4" drill bit with a 1/8" shaft. that would work
nicely.
thanks. charlie ke2sp

Recent Activity

7
New Members

2
New Photos

1
New Files

Visit Your Group
Give Back

Yahoo! for Good
Get inspired
by a good cause.

Y! Toolbar
Get it Free!
easy 1-click access
to your groups.

Yahoo! Groups
Start a group
in 3 easy steps.
Connect with others.

.

All New Yahoo! Mail ? Tired of unwanted email come-ons? Let our SpamGuard protect you.

920. Re: [AT_Sprint] ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-07 17:39:34 UTC
From: Vojtěch Bubník
Topic: 905 Message: 920

Hi Steve.

> While the DDS will change its output frequency nearly instantaneously, it
> does it in a phase contiunous mannor. Because of this and the relatively
> small frequency shift for TTY, I don't think there is much of a problem.

MFSK16 modulator does exactly this and I did not hear any complaints about excessive bandwidth.

> As for PSK, instead of doing abrupt 180 degree phase changes, I would think
> you could do it in smaller steps and simulate the cosine phase change rate.
> A simple look up table could do this.

PSK31 decoders use the amplitude envelope to sync. I am affraid that most of PSK31 decoders will not be able to sync to a PSK signal with constant envelope. I simulated a BPSK31 signal with a simple RC shaped CW envelope and the decoder was able to sync and decode successfully.

Steve, do You plan to run another batch of ATS's? How about to learn them to talk digitaly? I am desperately looking for someone to do the hardware job. While I am a good programer, the hardware that I create ends up in the flames quite often.

73, Vojtech OK1IAK

921. Re: [AT_Sprint] ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-07 17:44:20 UTC
From: Vojtěch Bubník
Topic: 905 Message: 921

Hi Gill.

You will find spectrograms of MFSK16 signals here.
http://www.qsl.net/zl1bpu/MFSK/Index.htm

The frequency is switched instaneously without a phase change. This is what the DDS may do itself very precisely. I do not think that the signal is too wide, espetially at QRP levels.

73, Vojtech OK1IAK

> ------------ Původní zpráva ------------
> Od: Gil Stacy <gilstacy@...>
> Předmět: Re: [AT_Sprint] ATS3 and portable digital modes
> Datum: 07.2.2007 16:43:11
> --
> >
> >
> > I think you're going to have a very wide spectrum unless you find a way
> > to limit the slew-rate of the frequency transitions. Has N4QA published a
> > spectrum plot of the output?
> >
>
> Joe,
> There's a plot in the second link I posted this a.m. Scroll down the page.
> 73 Gil NN4CW
>
>
>

922. cut numbers

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-07 17:58:47 UTC
From: w8bhk
Topic: 922 Message: 922

Hi I'm new to the grp and have had a ats-3 for quite a while and just love the rig, but one thing thats hard for me to get use to is the cut numbers for the frequency readout. My brain has to do a double take every time I use this feature. I was just wondering if this was done for programing reasons or just Steve's personal choice. It's something I can live with, but would of prefered a normal readout of the numbers.

Thanks
Harcourt(Bud)
w8bhk

923. Re: [AT_Sprint] ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-07 18:19:39 UTC
From: Joe Rocci
Topic: 905 Message: 923

Vojtech,

If you have an idea for how to implement the digital mode modulations directly at the RF frequency without need for a linear SSB exciter, then I would be willing to develop the hardware and PCB. I already have a couple of add-on ATS enhancement projects underway in my CAD system, but it might be better to start from scratch and make an "ATS-like" rig that was intended for digital from the outset. If we can agree on a design, I'll develop PCBs and share with you. Feel free to contact me off-line if you want to discuss further, as I've also given a lot of thought to what I want and how I'd implement it.

Joe
W3JDR

----- Original Message -----
From: Vojtìch Bubník
To: AT_Sprint@yahoogroups.com
Sent: Wednesday, February 07, 2007 12:39 PM
Subject: Re: [AT_Sprint] ATS3 and portable digital modes

Hi Steve.

> While the DDS will change its output frequency nearly instantaneously, it
> does it in a phase contiunous mannor. Because of this and the relatively
> small frequency shift for TTY, I don't think there is much of a problem.

MFSK16 modulator does exactly this and I did not hear any complaints about excessive bandwidth.

> As for PSK, instead of doing abrupt 180 degree phase changes, I would think
> you could do it in smaller steps and simulate the cosine phase change rate.
> A simple look up table could do this.

PSK31 decoders use the amplitude envelope to sync. I am affraid that most of PSK31 decoders will not be able to sync to a PSK signal with constant envelope. I simulated a BPSK31 signal with a simple RC shaped CW envelope and the decoder was able to sync and decode successfully.

Steve, do You plan to run another batch of ATS's? How about to learn them to talk digitaly? I am desperately looking for someone to do the hardware job. While I am a good programer, the hardware that I create ends up in the flames quite often.

73, Vojtech OK1IAK

924. Re: [AT_Sprint] ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-07 18:55:52 UTC
From: Vojtěch Bubník
Topic: 905 Message: 924

Hi Joe.

I will discuss it on the list until we get into much details. I hope others will be interested too.

The DDS itself allows direct FSK or PSK modulations, only one tone may be sent at an instant.

The digital modes may be roughly split into three groups:

1) Constant envelope single carrier - CW, CCW, RTTY, AMTOR, MFSK16, FELD HELL, PACTOR1, DOMINO, HF Packet
2) Single amplitude modulated carrier - PSK31, Olivia(*), PSKHELL,
3) Multitone - MT HELL, THROB, MT63, PACTOR2/3, fancy mode IDs

(*) The Olivia tones are ovelapping slightly in time, but with a slight loss of S/N at the receiver it is possible to use other shaping to produce only one tone at a time.

Let's forget the multitone modes that would really need a SSB modulator. The other modes may be realizable with the hardware of ATS3, if the RX/TX switch is modulated by a PWM. I am not sure whether the MCU of ATS3 will be powerfull enough. Even if PWM is not used, it shall be possible to modulate 1) perfectly and 2) with some compromises on signal quality.

If you want to design a transcever for single carrier modes - 1) and 2), a good choice may be to generate the envelope by the PC or PDA sound card at say 3kHz, to rectify it at the TRX and use the voltage to modulate the PA. This would give the PSK31 signal a perfect envelope.

Look at the MedFer modulator. http://www.ka7oei.com/am_tx1.gif
The PA in E class is modulated by a PWM generated by the PIC.

73, Vojtech OK1IAK

925. Re: [AT_Sprint] cut numbers

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-07 19:01:10 UTC
From: Michael Harnage
Topic: 922 Message: 925

I don't speak for Steve, but I kept his cut numbers in
my version of the software mainly because the less
time the rig is using to annuciate the frequency the
more I can listen to the airwaves. At one time I was
announcing the full freq (MHz down to the 10's of
Hz)---just too much time spent in annunciate mode!

There is no cost difference (for programming) between
a "t" and a "0".

-mike/w1mt

--- w8bhk <w8bhk@...> wrote:

> I was just wondering
> if this was done
> for programing reasons or just Steve's personal
> choice.

Now that's room service! Choose from over 150,000 hotels
in 45,000 destinations on Yahoo! Travel to find your fit.
http://farechase.yahoo.com/promo-generic-14795097

926. Re: [AT_Sprint] ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-07 19:15:49 UTC
From: Michael Harnage
Topic: 905 Message: 926

YES! Please keep it on list. I for one am interested
in the discussion.

-mike/w1mt

--- Vojt?ch Bubn?k <bubnikv@...> wrote:

>
> I will discuss it on the list until we get into much
> details. I hope others will be interested too.
>

Need Mail bonding?
Go to the Yahoo! Mail Q&A for great tips from Yahoo! Answers users.
http://answers.yahoo.com/dir/?link=list&sid=396546091

927. Re: [AT_Sprint] cut numbers

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-07 19:23:59 UTC
From: John A. Evans - N0HJ
Topic: 922 Message: 927

I always thought that a dit would've been more appropriate to mark transition to the 100Hz place. T does throw me off at times. I guess I need to either reprogram mine or use it more ;)

72 - john - n0hj

Michael Harnage wrote:
>
> I don't speak for Steve, but I kept his cut numbers in
> my version of the software mainly because the less
> time the rig is using to annuciate the frequency the
> more I can listen to the airwaves.
>

928. Re: [AT_Sprint] ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-07 19:25:21 UTC
From: Joe Rocci
Topic: 905 Message: 928

Vojtech,

One of the big challenges I see in trying to make a 'pure digital' implementation is that ehe available software products only provide an audio output, whereas the digital modulator requires a digital input. To make things more difficult, modes that use multi-bit symbols (eg, MFSK) require that the user bit-stream be reassembled into n-bit symbols. This isn't difficult if you have access to the baseband bit stream, but it is challenging if all you have to work with is the audio output of a sound card and a low-end microcontroller.

Ideas??

Joe
W3JDR

----- Original Message -----
From: Vojtìch Bubník
To: AT_Sprint@yahoogroups.com
Sent: Wednesday, February 07, 2007 1:55 PM
Subject: Re: [AT_Sprint] ATS3 and portable digital modes

Hi Joe.

I will discuss it on the list until we get into much details. I hope others will be interested too.

The DDS itself allows direct FSK or PSK modulations, only one tone may be sent at an instant.

The digital modes may be roughly split into three groups:

1) Constant envelope single carrier - CW, CCW, RTTY, AMTOR, MFSK16, FELD HELL, PACTOR1, DOMINO, HF Packet
2) Single amplitude modulated carrier - PSK31, Olivia(*), PSKHELL,
3) Multitone - MT HELL, THROB, MT63, PACTOR2/3, fancy mode IDs

(*) The Olivia tones are ovelapping slightly in time, but with a slight loss of S/N at the receiver it is possible to use other shaping to produce only one tone at a time.

Let's forget the multitone modes that would really need a SSB modulator. The other modes may be realizable with the hardware of ATS3, if the RX/TX switch is modulated by a PWM. I am not sure whether the MCU of ATS3 will be powerfull enough. Even if PWM is not used, it shall be possible to modulate 1) perfectly and 2) with some compromises on signal quality.

If you want to design a transcever for single carrier modes - 1) and 2), a good choice may be to generate the envelope by the PC or PDA sound card at say 3kHz, to rectify it at the TRX and use the voltage to modulate the PA. This would give the PSK31 signal a perfect envelope.

Look at the MedFer modulator. http://www.ka7oei.com/am_tx1.gif
The PA in E class is modulated by a PWM generated by the PIC.

73, Vojtech OK1IAK

929. cut numbers

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-07 19:26:16 UTC
From: w8bhk
Topic: 922 Message: 929

Thanks Mike

You answered my Question, but it's hard to teach an old dog like me new tricks. It dosen't save me much time when I have to repeat the freq message two or three times and I have my code speed up to 25 or 30 wpm. The fault lies with me and my brain when I have to do the converion in my head and the way I leaned the code. I love Dave Benson's freq-mite that I have in other qrp rigs and then I go back to the ats-3 and do the two step dance. Hi Hi

Thanks,
Bud w8bhk

930. Help..Missing 3-a parts need source

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-07 20:53:06 UTC
From: pipesanddrums17
Topic: 930 Message: 930

I am using Cash Olsen's method for mounting the SMD parts on the 3-a board and have most of the parts in place on the top of the board.

I am missing parts that were not included in the kit specifically they are as follows:

the package marked Yellow/red stripe 470pf cap which goes to C 17

the package with markings LIGHT Blue/red Stripe 220p which goes to C 36

Anyone know where I can source these parts and if so what are the stock numbers?

Steve says he does not have any of these..
Time is an issue as the parts need to be soldered in palce shortly

Thanks in Advance
John

931. Re: [AT_Sprint] ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-07 21:14:44 UTC
From: Bill Noyce
Topic: 905 Message: 931

For PSK-31 envelope shaping, it should be possible to feed a raised-cosine curve into the PNP transistor (or is it a P-channel MOSFET?) that supplies power to the ATS-3's power amplifier. It would go in place of the CW envelope shaping that's there now. Or perhaps some analog circuitry could create the desired raised-cosine curve when prompted by the microprocessor, whenever a phase shift was about to take place.

> This isn't difficult if you have access to the baseband bit stream, but it is challenging if all you have to work with is the audio output of a sound card and a low-end microcontroller.

Define "low-end"? I'm not familiar with the uP family Steve's using, but the dsPIC has 200 KHz multiplexed A/D inputs and can do a 16x16+32 mul-add every cycle at a reasonable clock rate, and Microchip has example software for filters, FFT's, and modems. The cheapest parts are about $5 from Mouser. I'd love to see some of the HF digital modes implemented on one of those.

Bill, AB1AV

932. Re: [AT_Sprint] ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-07 21:55:04 UTC
From: Joe Rocci
Topic: 905 Message: 932

I'd love to see some of the HF digital
modes implemented on one of those.

Bill,

I'd love it too, but it's way beyond the scope of what I'm willing to sign up for.

When I said 'low end", I was referring to the MSP430, but if I were starting from scratch I'd probably use something like the PIC18F2620, only because it has lots of memory, I/O, and internal peripherals and because I already have experience and the tools to develop for it.

Joe

----- Original Message -----
From: Bill Noyce
To: AT_Sprint@yahoogroups.com
Sent: Wednesday, February 07, 2007 4:14 PM
Subject: Re: [AT_Sprint] ATS3 and portable digital modes

For PSK-31 envelope shaping, it should be possible to feed a
raised-cosine curve into the PNP transistor (or is it a P-channel
MOSFET?) that supplies power to the ATS-3's power amplifier. It would
go in place of the CW envelope shaping that's there now. Or perhaps
some analog circuitry could create the desired raised-cosine curve
when prompted by the microprocessor, whenever a phase shift was about
to take place.

> This isn't difficult if you have access to the baseband bit stream, but it is challenging if all you have to work with is the audio output of a sound card and a low-end microcontroller.

Define "low-end"? I'm not familiar with the uP family Steve's using,
but the dsPIC has 200 KHz multiplexed A/D inputs and can do a 16x16+32
mul-add every cycle at a reasonable clock rate, and Microchip has
example software for filters, FFT's, and modems. The cheapest parts
are about $5 from Mouser. I'd love to see some of the HF digital
modes implemented on one of those.

Bill, AB1AV

933. Re: [AT_Sprint] Help..Missing 3-a parts need source

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-07 23:09:44 UTC
From: Gil Stacy
Topic: 930 Message: 933
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

934. Re: [AT_Sprint] Help..Missing 3-a parts need source

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-07 23:14:19 UTC
From: Terry WAØITP
Topic: 930 Message: 934

I'm using a cheep electric skillet from Wally's to pre
heat.. Works fine nd plenty big.

72 73
Terry, WAØITP
http://www.wa0dx.org/wa0itp
http://www.wa0dx.org
http://www.4sqrp.com/

----- Original Message -----
From: Gil Stacy
To: AT_Sprint@yahoogroups.com
Sent: Wednesday, February 07, 2007 5:09 PM
Subject: Re: [AT_Sprint] Help..Missing 3-a parts need source

John,
Sorry but I don't have the caps, but were you able to find
the beverage warmer at Wallyworld?
None at my store; the candle electric warming plates for
scented candle oil are similar, but only heat up to 76 C.
There is a question about the plastic's ability to withstand
the hot air gun as well. If I can't find a beter option,
I'll try wrapping the plastic in alumimum foil. I also
"stepped" up the diameter of the heating surface by stacking
thin slate disks of increasing diameter to transfer the heat
upwards to give the board full contact with a heated
surface. The hotplate's surface is smaller than the board.
73 Gil NN4CW

No virus found in this incoming message.
Checked by AVG Free Edition.
Version: 7.5.432 / Virus Database: 268.17.29/673 - Release
Date: 2/6/2007 5:52 PM

935. Re: [AT_Sprint] Help..Missing 3-a parts need source

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-08 02:36:15 UTC
From: asfco
Topic: 930 Message: 935

Yes I have everything I need but those caps...I will go ahead and solder in everything that's mounted and do the caps later. I am confident that I will have no trouble using cash's method..others have also reported good results
73 John
----- Original Message -----
From: Gil Stacy
To: AT_Sprint@yahoogroups.com
Sent: Wednesday, February 07, 2007 6:09 PM
Subject: Re: [AT_Sprint] Help..Missing 3-a parts need source

John,
Sorry but I don't have the caps, but were you able to find the beverage warmer at Wallyworld?
None at my store; the candle electric warming plates for scented candle oil are similar, but only heat up to 76 C. There is a question about the plastic's ability to withstand the hot air gun as well. If I can't find a beter option, I'll try wrapping the plastic in alumimum foil. I also "stepped" up the diameter of the heating surface by stacking thin slate disks of increasing diameter to transfer the heat upwards to give the board full contact with a heated surface. The hotplate's surface is smaller than the board.
73 Gil NN4CW

936. Re: [AT_Sprint] ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-07 15:47:42 UTC
From: Gil Stacy
Topic: 905 Message: 936
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

937. Re: [AT_Sprint] ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-08 08:00:31 UTC
From: Vojtěch Bubník
Topic: 905 Message: 937

Hi Joe,

> One of the big challenges I see in trying to make a 'pure digital'
> implementation is that ehe available software products only provide an audio
> output, whereas the digital modulator requires a digital input. To make things
> more difficult, modes that use multi-bit symbols (eg, MFSK) require that the
> user bit-stream be reassembled into n-bit symbols. This isn't difficult if you
> have access to the baseband bit stream, but it is challenging if all you have to
> work with is the audio output of a sound card and a low-end microcontroller.

Well, the idea is to extend the terminal software. Look at PocketDigi
http://pocketdigi.sourceforge.net

You could download the desktop binary and play with it. The binary is about 200k big and it implements most of the nowadays used modes already. The program was derived from gMFSK, which is a Linux multimode terminal. The sources GPLed. The software runs on any 200MHz pentium and any 200MHz Pocket PC device.

I thought about this one year already. My intention is to extend the software to generate a slow async serial stream over one soundcard channel and it would be possible to generate the amplitude envelope by the other sound channel. The digital signal may be generated at 44kHz, every sample has to be 2x duplicated to go through the antialias filter. After the sound signal is amplified and limited, it will generate a nice digital serial stream at 22kBd synchronized with the amplitude envelope. You don't need more informatin to describe most of the digital signals used by HAMs nowadays.

There will be minimal requirements on the TRX's processor and firmware. The firmware would get the mode command, main tuning word and during the modulation it would only get increments of the tuning word or a phase (0,90, 180,270). Just after it receives the modulation word, it adds it to the main word and sends it to the DDS. So the modulation will be clocked by the rate by which the sound card generates tuning words.

It woud be nice if the new ATS would contain the PA AM modulator circuit and sound to serial amplifier/limiter. If the ATS has to be kept small and lightweight, there may be possible to add an additional board holding just the AM modulator and serial stream shaping circuit.

73, Vojtech OK1IAK

938. Re: [AT_Sprint] ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-08 11:14:21 UTC
From: Joe Rocci
Topic: 905 Message: 938

>>After the sound signal is amplified and limited, it will generate a nice digital serial stream at 22kBd synchronized with the amplitude envelope.

I'm a little fuzzy about how you'd send baseband data through the soundcard, as the output is probably AC coupled.
What would be the format of this serial stream? Does it stay in one state when no characters are being transmitted? Does it have a DC component? (if so, there will be a problem with baseline shift as it passes through the coupling cap in the sounscard).

Also, if the mode is expressed in the transmitted data, then why the need for a seperate channel to tell the transmitter when to switch the envelope? Can't the transmitter figure it out from the contents of the data stream? And why such a high rate (22kb)? Can it be slowed down to give the micro in the TX more time to do the things it has to do?

Joe
W3JDR

----- Original Message -----
From: Vojtech Bubník
To: AT_Sprint@yahoogroups.com
Sent: Thursday, February 08, 2007 3:00 AM
Subject: Re: [AT_Sprint] ATS3 and portable digital modes

Hi Joe,

> One of the big challenges I see in trying to make a 'pure digital'
> implementation is that ehe available software products only provide an audio
> output, whereas the digital modulator requires a digital input. To make things
> more difficult, modes that use multi-bit symbols (eg, MFSK) require that the
> user bit-stream be reassembled into n-bit symbols. This isn't difficult if you
> have access to the baseband bit stream, but it is challenging if all you have to
> work with is the audio output of a sound card and a low-end microcontroller.

Well, the idea is to extend the terminal software. Look at PocketDigi
http://pocketdigi.sourceforge.net

You could download the desktop binary and play with it. The binary is about 200k big and it implements most of the nowadays used modes already. The program was derived from gMFSK, which is a Linux multimode terminal. The sources GPLed. The software runs on any 200MHz pentium and any 200MHz Pocket PC device.

I thought about this one year already. My intention is to extend the software to generate a slow async serial stream over one soundcard channel and it would be possible to generate the amplitude envelope by the other sound channel. The digital signal may be generated at 44kHz, every sample has to be 2x duplicated to go through the antialias filter. After the sound signal is amplified and limited, it will generate a nice digital serial stream at 22kBd synchronized with the amplitude envelope. You don't need more informatin to describe

most of the digital signals used by HAMs nowadays.

There will be minimal requirements on the TRX's processor and firmware. The firmware would get the mode command, main tuning word and during the modulation it would only get increments of the tuning word or a phase (0,90, 180,270). Just after it receives the modulation word, it adds it to the main word and sends it to the DDS. So the modulation will be clocked by the rate by which the sound card generates tuning words.

It woud be nice if the new ATS would contain the PA AM modulator circuit and sound to serial amplifier/limiter. If the ATS has to be kept small and lightweight, there may be possible to add an additional board holding just the AM modulator and serial stream shaping circuit.

73, Vojtech OK1IAK

939. Re: [AT_Sprint] ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-08 11:37:07 UTC
From: Joe Rocci
Topic: 905 Message: 939

BTW Vojtech,

In my preferred embodiment, I was going to use a USB-serial chip (www.ftdichip.com) to connect the rig and the computer. This would make the interface clean and it would allow the computer to power the rig (at least for Rx and low power Tx). If you're going to modify the computer program, could you just use a USB virtual COM port to send serial data to the rig? Since it's going to be there anyway, why not use it and eliminate the complexity of more cables and more more interface circuits?

Joe

----- Original Message -----
From: Vojtech Bubník
To: AT_Sprint@yahoogroups.com
Sent: Thursday, February 08, 2007 3:00 AM
Subject: Re: [AT_Sprint] ATS3 and portable digital modes

Hi Joe,

> One of the big challenges I see in trying to make a 'pure digital'
> implementation is that ehe available software products only provide an audio
> output, whereas the digital modulator requires a digital input. To make things
> more difficult, modes that use multi-bit symbols (eg, MFSK) require that the
> user bit-stream be reassembled into n-bit symbols. This isn't difficult if you
> have access to the baseband bit stream, but it is challenging if all you have to
> work with is the audio output of a sound card and a low-end microcontroller.

Well, the idea is to extend the terminal software. Look at PocketDigi
http://pocketdigi.sourceforge.net

You could download the desktop binary and play with it. The binary is about 200k big and it implements most of the nowadays used modes already. The program was derived from gMFSK, which is a Linux multimode terminal. The sources GPLed. The software runs on any 200MHz pentium and any 200MHz Pocket PC device.

I thought about this one year already. My intention is to extend the software to generate a slow async serial stream over one soundcard channel and it would be possible to generate the amplitude envelope by the other sound channel. The digital signal may be generated at 44kHz, every sample has to be 2x duplicated to go through the antialias filter. After the sound signal is amplified and limited, it will generate a nice digital serial stream at 22kBd synchronized with the amplitude envelope. You don't need more informatin to describe most of the digital signals used by HAMs nowadays.

There will be minimal requirements on the TRX's processor and firmware. The firmware would get the mode command, main tuning word and during the modulation it would only get increments of the tuning word or a phase (0,90, 180,270). Just after it receives the modulation word, it adds it to the main word and sends it to the DDS. So the modulation

will be clocked by the rate by which the sound card generates tuning words.

It woud be nice if the new ATS would contain the PA AM modulator circuit and sound to serial amplifier/limiter. If the ATS has to be kept small and lightweight, there may be possible to add an additional board holding just the AM modulator and serial stream shaping circuit.

73, Vojtech OK1IAK

940. Re: [AT_Sprint] ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-08 12:33:02 UTC
From: Vojtěch Bubník
Topic: 905 Message: 940

> I'm a little fuzzy about how you'd send baseband data through the soundcard, as
> the output is probably AC coupled.

The format may be an 8 bit serial stream. There will be -255, -255 for serial 1 and 255,255 for serial 0 put into the stream.
I am affaid about the AC coupling slightly, but the stream may always be scrambled to make it more random to get rid of the DC. I once planned to do some tests, but I was too busy by developing PocketDigi.

> What would be the format of this serial stream? Does it stay in one state when
> no characters are being transmitted? Does it have a DC component? (if so, there
> will be a problem with baseline shift as it passes through the coupling cap in
> the sounscard).

I propose to let the signal drop to 0 between packets. Positive voltages will be detected as logical 0, voltages around 0 and negative will be detected as logical 1. It shall work with short cables in my opinion. I think that with the PC cards it may be sufficient to clamp the signal by one zener diode to get a digital signal. It will not work with Pocket PCs, which sound cards generate much lower amplitudes.

The digital modes in use usually have a constrained number of states. MFSK16 uses 16 tones, Olivia 32/xx uses 32 tones. BPSK31 uses two phases, QPSK31 4 phases. I propose to load the DDS words into the internal memory of the firmware on the start of the transmition and to send just the address of the tuning word on each transmitted symbol.

> Also, if the mode is expressed in the transmitted data, then why the need for a
> seperate channel to tell the transmitter when to switch the envelope? Can't the
> transmitter figure it out from the contents of the data stream? And why such a
> high rate (22kb)? Can it be slowed down to give the micro in the TX more time to
> do the things it has to do?

The 22kbit speed will allow you to send about 2000 bytes per second. That's not much. If the controller in the transceiver does not have a hardware UART and the stream would have to be received in a loop, the data need to be send fast enough to let the controller do something else in the gaps between the transmitions. 22kBit is maximum realisable with a common sound card.

The controller may generate the envelope itself. You would have to program the envelopes into the controller. If another mode will be added, the envelope would have either be uploaded to the controller, or an updated firmware would have to be flashed. Additionally it would mean a more complex firmware. But if you modulate the PA by a rectified signal from the second channel, there will be no support needed in the firmware and the control computer would have full freedom to change the envelope.

I am not saying that the solution with the envelope generated by the second sound channel is the best one, but is certainly feasible and in my opinion the easiest one to implement both in HW/SW. The firmware solution is nicer from the engineering point of view, but my

resources are too constrained to implement a fancy firmware.

73, Vojtech OK1IAK

941. Re: [AT_Sprint] ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-08 12:48:19 UTC
From: Joe Rocci
Topic: 905 Message: 941

I'm very concerned about the DC component of the data. As you suggested, you could scramble it with a pseudo-random key but then the micro in the rig would have to descramble it again - no time for it to 'take a breath' and do something else. The more real-time burden that's placed on the micro in the rig, the less time it will have for some other real-time features I had planned. I guess we could put in a small dedicated micro just to handle this, but I was hoping to keep it simple.

Do you see a difficulty in just sending the Tx data over the USB serial? In my present embodiment the USB connection will be there anyway for rig control (frequency, volume, etc). With an extension to the serial protocol, you could send mode information that would let the micro in the rig know whether to perform envelope gating between symbols, what to use for the slew waveform and rate, etc.

Is this beyond the scope of the mods you intended to make to the PC/Handheld program? If this is to be a cooperative effort, then somewhere someone will have to step up to some changes to their approach.

Joe

----- Original Message -----
From: Vojtich Bubník
To: AT_Sprint@yahoogroups.com
Sent: Thursday, February 08, 2007 7:33 AM
Subject: Re: [AT_Sprint] ATS3 and portable digital modes

> I'm a little fuzzy about how you'd send baseband data through the soundcard, as
> the output is probably AC coupled.

The format may be an 8 bit serial stream. There will be -255, -255 for serial 1 and 255,255 for serial 0 put into the stream.
I am affaid about the AC coupling slightly, but the stream may always be scrambled to make it more random to get rid of the DC. I once planned to do some tests, but I was too busy by developing PocketDigi.

> What would be the format of this serial stream? Does it stay in one state when
> no characters are being transmitted? Does it have a DC component? (if so, there
> will be a problem with baseline shift as it passes through the coupling cap in
> the sounscard).

I propose to let the signal drop to 0 between packets. Positive voltages will be detected as logical 0, voltages around 0 and negative will be detected as logical 1. It shall work with short cables in my opinion. I think that with the PC cards it may be sufficient to clamp the signal by one zener diode to get a digital signal. It will not work with Pocket PCs, which sound cards generate much lower amplitudes.

The digital modes in use usually have a constrained number of states. MFSK16 uses 16 tones, Olivia 32/xx uses 32 tones. BPSK31 uses two phases, QPSK31 4 phases. I propose to load the

DDS words into the internal memory of the firmware on the start of the transmition and to send just the address of the tuning word on each transmitted symbol.

> Also, if the mode is expressed in the transmitted data, then why the need for a
> seperate channel to tell the transmitter when to switch the envelope? Can't the
> transmitter figure it out from the contents of the data stream? And why such a
> high rate (22kb)? Can it be slowed down to give the micro in the TX more time to
> do the things it has to do?

The 22kbit speed will allow you to send about 2000 bytes per second. That's not much. If the controller in the transceiver does not have a hardware UART and the stream would have to be received in a loop, the data need to be send fast enough to let the controller do something else in the gaps between the transmitions. 22kBit is maximum realisable with a common sound card.

The controller may generate the envelope itself. You would have to program the envelopes into the controller. If another mode will be added, the envelope would have either be uploaded to the controller, or an updated firmware would have to be flashed. Additionally it would mean a more complex firmware. But if you modulate the PA by a rectified signal from the second channel, there will be no support needed in the firmware and the control computer would have full freedom to change the envelope.

I am not saying that the solution with the envelope generated by the second sound channel is the best one, but is certainly feasible and in my opinion the easiest one to implement both in HW/SW. The firmware solution is nicer from the engineering point of view, but my resources are too constrained to implement a fancy firmware.

73, Vojtech OK1IAK

942. Re: [AT_Sprint] ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-08 12:13:53 UTC
From: Vojtěch Bubník
Topic: 905 Message: 942

Hi Joe.

The reason not to use USB is that only a fraction of Pocket PC devices support USB host. Even if the Pocket PC device supports serial over USB Host, the cables are clumsy and expensive. And the speed is really not nescessary IMHO.

73, Vojtech OK1IAK

> ------------ Původní zpráva ------------
> Od: Joe Rocci <joe@...>
> Předmět: Re: [AT_Sprint] ATS3 and portable digital modes
> Datum: 08.2.2007 12:40:18
> --
> BTW Vojtech,
>
> In my preferred embodiment, I was going to use a USB-serial chip
> (www.ftdichip.com) to connect the rig and the computer. This would make the
> interface clean and it would allow the computer to power the rig (at least for
> Rx and low power Tx). If you're going to modify the computer program, could you
> just use a USB virtual COM port to send serial data to the rig? Since it's going
> to be there anyway, why not use it and eliminate the complexity of more cables
> and more more interface circuits?
>
> Joe
>
>
> ----- Original Message -----
> From: Vojtech Bubník
> To: AT_Sprint@yahoogroups.com
> Sent: Thursday, February 08, 2007 3:00 AM
> Subject: Re: [AT_Sprint] ATS3 and portable digital modes
>
>
> Hi Joe,
>
> > One of the big challenges I see in trying to make a 'pure digital'
> > implementation is that ehe available software products only provide an
> audio
> > output, whereas the digital modulator requires a digital input. To make
> things
> > more difficult, modes that use multi-bit symbols (eg, MFSK) require that
> the
> > user bit-stream be reassembled into n-bit symbols. This isn't difficult if
> you
> > have access to the baseband bit stream, but it is challenging if all you
> have to

> > work with is the audio output of a sound card and a low-end
> microcontroller.
>
> Well, the idea is to extend the terminal software. Look at PocketDigi
> http://pocketdigi.sourceforge.net
>
> You could download the desktop binary and play with it. The binary is about
> 200k big and it implements most of the nowadays used modes already. The program
> was derived from gMFSK, which is a Linux multimode terminal. The sources GPLed.
> The software runs on any 200MHz pentium and any 200MHz Pocket PC device.
>
> I thought about this one year already. My intention is to extend the software
> to generate a slow async serial stream over one soundcard channel and it would
> be possible to generate the amplitude envelope by the other sound channel. The
> digital signal may be generated at 44kHz, every sample has to be 2x duplicated
> to go through the antialias filter. After the sound signal is amplified and
> limited, it will generate a nice digital serial stream at 22kBd synchronized
> with the amplitude envelope. You don't need more informatin to describe most of
> the digital signals used by HAMs nowadays.
>
> There will be minimal requirements on the TRX's processor and firmware. The
> firmware would get the mode command, main tuning word and during the modulation
> it would only get increments of the tuning word or a phase (0,90, 180,270). Just
> after it receives the modulation word, it adds it to the main word and sends it
> to the DDS. So the modulation will be clocked by the rate by which the sound
> card generates tuning words.
>
> It woud be nice if the new ATS would contain the PA AM modulator circuit and
> sound to serial amplifier/limiter. If the ATS has to be kept small and
> lightweight, there may be possible to add an additional board holding just the
> AM modulator and serial stream shaping circuit.
>
> 73, Vojtech OK1IAK
>
>
>
>
>

943. Re: [AT_Sprint] ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-08 13:17:54 UTC
From: Joe Rocci
Topic: 905 Message: 943

Vojtech,

If we limit this to Pocket PC , we'll severely limit the applicability for most of this group.

How about some other form of serial data interface, such as RS-232? I could make provision in the interface for both standards.

Joe

----- Original Message -----
From: "Vojt?ch Bubn?k" <bubnikv@...>
To: <AT_Sprint@yahoogroups.com>
Sent: Thursday, February 08, 2007 7:13 AM
Subject: Re: [AT_Sprint] ATS3 and portable digital modes

Hi Joe.

The reason not to use USB is that only a fraction of Pocket PC devices support USB host. Even if the Pocket PC device supports serial over USB Host, the cables are clumsy and expensive. And the speed is really not nescessary IMHO.

73, Vojtech OK1IAK

> ------------ P?vodn? zpr?va ------------
> Od: Joe Rocci <joe@...>
> P?edm?t: Re: [AT_Sprint] ATS3 and portable digital modes
> Datum: 08.2.2007 12:40:18
> ---------------------------------------
> BTW Vojtech,
>
> In my preferred embodiment, I was going to use a USB-serial chip
> (www.ftdichip.com) to connect the rig and the computer. This would make the
> interface clean and it would allow the computer to power the rig (at least for
> Rx and low power Tx). If you're going to modify the computer program, could you
> just use a USB virtual COM port to send serial data to the rig? Since it's going
> to be there anyway, why not use it and eliminate the complexity of more cables
> and more more interface circuits?
>
> Joe
>

>
> ----- Original Message -----
> From: Vojtech Bubn?k
> To: AT_Sprint@yahoogroups.com
> Sent: Thursday, February 08, 2007 3:00 AM
> Subject: Re: [AT_Sprint] ATS3 and portable digital modes
>
>
> Hi Joe,
>
> > One of the big challenges I see in trying to make a 'pure digital'
> > implementation is that ehe available software products only provide an
> audio
> > output, whereas the digital modulator requires a digital input. To
make
> things
> > more difficult, modes that use multi-bit symbols (eg, MFSK) require
that
> the
> > user bit-stream be reassembled into n-bit symbols. This isn't
difficult if
> you
> > have access to the baseband bit stream, but it is challenging if all
you
> have to
> > work with is the audio output of a sound card and a low-end
> microcontroller.
>
> Well, the idea is to extend the terminal software. Look at PocketDigi
> http://pocketdigi.sourceforge.net
>
> You could download the desktop binary and play with it. The binary is
about
> 200k big and it implements most of the nowadays used modes already. The
program
> was derived from gMFSK, which is a Linux multimode terminal. The sources
GPLed.
> The software runs on any 200MHz pentium and any 200MHz Pocket PC device.
>
> I thought about this one year already. My intention is to extend the
software
> to generate a slow async serial stream over one soundcard channel and it
would
> be possible to generate the amplitude envelope by the other sound channel.
The
> digital signal may be generated at 44kHz, every sample has to be 2x
duplicated
> to go through the antialias filter. After the sound signal is amplified
and
> limited, it will generate a nice digital serial stream at 22kBd

synchronized
> with the amplitude envelope. You don't need more informatin to describe
most of
> the digital signals used by HAMs nowadays.
>
> There will be minimal requirements on the TRX's processor and firmware.
The
> firmware would get the mode command, main tuning word and during the
modulation
> it would only get increments of the tuning word or a phase (0,90,
180,270). Just
> after it receives the modulation word, it adds it to the main word and
sends it
> to the DDS. So the modulation will be clocked by the rate by which the
sound
> card generates tuning words.
>
> It woud be nice if the new ATS would contain the PA AM modulator circuit
and
> sound to serial amplifier/limiter. If the ATS has to be kept small and
> lightweight, there may be possible to add an additional board holding just
the
> AM modulator and serial stream shaping circuit.
>
> 73, Vojtech OK1IAK
>
>
>
>
>

Yahoo! Groups Links

944. Soldering SMD parts WOW!!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-08 16:04:55 UTC
From: pipesanddrums17
Topic: 944 Message: 944

First off I had decided to use Cash Olsen's method for SMD soldering
http://www.zianet.com/erg/SMT_Soldering.html
and had most of the parts in place on top of the 3-A board when I
discovered a couple were missing. There is a time element involved
with this process so waiting a week for the parts was out of the
question.
I decided it best to go ahead and get everything soldered in and do
the remaining couple parts when they are delivered.
At first I was a bit skeptical about trying this method but let me
tell you it was a pleasure to see the parts all fall into perfect
alignment as the heat was applied. Within 1 minnute after heat from the
embossing gun was applied all the parts were soldered in place with no
solder bridging between the legs of the IC's.
It has been awhile since I have worked with SMD and my eyes aren't what
they used to be however, I think that attempting this job without
Cash's method would have been a big mistake this made things much
easier and the results are amazing.
Only problem was that the board is a bit too big to fit on a
beverage warmer so I just used the hot plate that's on the coffee maker
which was perfect.

945. Re: [AT_Sprint] ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-08 17:44:37 UTC
From: Steven Weber
Topic: 905 Message: 945

Its irronic that digital modes are most easily implemented with an analog rig<G>

Keep in mind I do plan on doing a SMT SSB rig at some point. It won't be as small as the ATS rigs, to a large extent due to the space requirements of the linear amplifier.

Making it mulit band is something of a challenge, due to the Tx mixer band pass filter requirements. My thought has been to make this a 17 to 10M rig, as I can use a single Tx LPF and a wide band pass filter for the Tx mixer and a similer one for the Rx input. The main thing is to keep the IF (8 MHz) and VCO (26-36 MHz) out of the PA.

I've built one of these and it basically works, but there's a little too much VCO in the Tx output and the VCO doesn't have quite enough span to get all the way into the 10M band. (PLL VFO)

The project is currently on the back burner, as it will still be awhile before the high bands start to show life. Maybe a better choice of bands would be 20/17/15 for the near term. Hopefully, I'll have time to work some more on this proect in the near future.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

946. Re: [AT_Sprint] ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-08 19:32:31 UTC
From: Joe Rocci
Topic: 905 Message: 946

Steve,

Have you considered making a phasing exciter using something like a Tayloe mixer in reverse? You'd have to run the DDS at the output frequency and put individual RF phase-shift networks on the band modules, or alternatively run a DDS at 4x the operating frequency and use a digital multi-phase generator. The former could possibly be accomplished with the 9834 DDS and would be fairly power efficient. The latter would be less complex from a circuit standpoint, but would probably be a power hog. Either way though, you'd eliminate the mixer-filtering-spurious problems.

Joe
W3JDR

----- Original Message -----
From: Steven Weber
To: AT_Sprint@yahoogroups.com
Sent: Thursday, February 08, 2007 12:44 PM
Subject: Re: [AT_Sprint] ATS3 and portable digital modes

Its irronic that digital modes are most easily implemented with an analog rig<G>

Keep in mind I do plan on doing a SMT SSB rig at some point. It won't be as small as the ATS rigs, to a large extent due to the space requirements of the linear amplifier.

Making it mulit band is something of a challenge, due to the Tx mixer band pass filter requirements. My thought has been to make this a 17 to 10M rig, as I can use a single Tx LPF and a wide band pass filter for the Tx mixer and a similer one for the Rx input. The main thing is to keep the IF (8 MHz) and VCO (26-36 MHz) out of the PA.

I've built one of these and it basically works, but there's a little too much VCO in the Tx output and the VCO doesn't have quite enough span to get all the way into the 10M band. (PLL VFO)

The project is currently on the back burner, as it will still be awhile before the high bands start to show life. Maybe a better choice of bands would be 20/17/15 for the near term. Hopefully, I'll have time to work some more on this proect in the near future.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

947. Re: [AT_Sprint] ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-09 02:43:27 UTC
From: Steven Weber
Topic: 905 Message: 947

>Have you considered making a phasing exciter using something like a Tayloe mixer in reverse?

I've considered it, but not too seriously. IMOHO, your trading one can of worms for a bigger one. The mixer is simple, but what you have to connect up to it to make it work isn't, no matter what approch you take.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

948. Re: [AT_Sprint] ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-09 03:29:24 UTC
From: Joe Rocci
Topic: 905 Message: 948

You're referring to the phasing networks I presume?

I think the audio network is pretty straightforward these days, but the RF phasing network can be a challenge in a multi-band radio. I was considering individual LC networks with varactor fine-tuning from a PWM output on the micro driven by a lookup table. This way the RF phase shift variation could be compensated in firmware.

Joe
W3JDR

----- Original Message -----
From: Steven Weber
To: AT_Sprint@yahoogroups.com
Sent: Thursday, February 08, 2007 9:43 PM
Subject: Re: [AT_Sprint] ATS3 and portable digital modes

>Have you considered making a phasing exciter using something like a Tayloe
mixer in reverse?

I've considered it, but not too seriously. IMOHO, your trading one can of
worms for a bigger one. The mixer is simple, but what you have to connect
up to it to make it work isn't, no matter what approch you take.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

949. Re: ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-09 04:13:47 UTC
From: Tim Keene
Topic: 905 Message: 949

My vote is for a 60m ssb rig. It's a very cool band and generally has a very nice 500 mile radius of coverage. If you folks have not tried it yet you should.
Tim K5DEZ

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
>
> Its irronic that digital modes are most easily implemented with an analog
> rig<G>
>
> Keep in mind I do plan on doing a SMT SSB rig at some point. It won't be as
> small as the ATS rigs, to a large extent due to the space requirements of
> the linear amplifier.
>
>

950. Re: [AT_Sprint] ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-09 07:22:26 UTC
From: Vojtěch Bubník
Topic: 905 Message: 950

If the transceiver is used just as a modem for digital modes, phasing exciter seems to be attractive, because the master computer may provide the 90 grades phase shifted baseband signal already. But the AF phase shifter will be needed for standalone SSB anyway.

The phasing exciter needs a quadrature local oscillator. If the transceiver is multiband and is not constrained to a narrow subbands, the RC phasing is too narrow band. My friend Peter OK1XGL actually did some tests and one RC phasing was not exact enough for the whole 80M SSB subband. The option is to run the oscillator 4x faster and divide it, for 10M band you will end up running the oscillator at 112MHz. If you use a DDS, you would either have to use two of them, or use a DDS with a quadrature output, or you will need something clocked at 300MHz, which will not be power efficient anymore.

I built an 80m phasing receiver with two NE612 mixers, RC LO phasing and an AF CW filter. It works well, but was quite difficult to debug. The main problem is huge AF amplification and resulting AF loopbacks, and leakage of the LO outside the TRX , modulating of the LO on the power supply rectifier diodes and receiving back the 50Hz AM modulated signal.

If the first mixer gets overloaded as it is usuall at 40M in Europe, it will AM demodulate the strongest signals. In case of superhet the AF products will be clipped by the IF filter. This is a great advantage if active mixers are used. On the contrary, the AM demodulated signals will be heard in the phasing receiver.

So generally it is easier and more straightforward to build a superhet than a phasing TRX. But anyway, IMHO for portable digital QRP operation the direct modulating of the DDS ist the way and only slight circuit modifications will be needed for ATS3 - bigger AM modulated PA, serial interface to a master computer.

73, Vojtech OK1IAK

951. Re: [AT_Sprint] ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-09 10:58:00 UTC
From: Joe Rocci
Topic: 905 Message: 951

Vojtech,

My comments about implementing a phasing exciter were somewhat accademic, as I'd prefer to implement digital-mode modulation right at the DDS and the final amp if possible. However, I do want to re-emphasize my point that implementing a good phasing exciter is somewhat easier than implementing a good phasing receiver. To your point about RC phasing networks, they can actually be a good choice under some circumstances. This is because a pair of RC "L" networks, one the inverse form of the other, will develop a 90 deg output-voltage phase relationship at all frequencies - only the amplitude relationship changes. In theory, this can be remedied with a pair of ideal zero-axis limiters (assuming sine wave), but the limiter design imposes other broadband challenges. A simpler approach would be to do something with a lookup table in the micro and a digipot to fix the amplitude variations. But enough of this - back to the discussion we were having.

Can you describe in further detail how you'd propose to send the digital data stream over, say, an asynchronous connection such as RS-232? How would you multiplex the phase information with the envelolope information and how would you seperate them at the Tx end of the link? Can you propose a protocol to also multiplex rig control information on the same serial link? If we can agree on a method, we can begin to exchange some hardware block diagrams, which will lead to schematics and a PCB.

As I said in a previous email, I was already working on an "enhancement" daughter board that would plug into the ATS programming header in order to implement remote computer-based rig control. That design also implemented remote volume control and provision for firmware-driven RF AGC of the receiver (there's a dedicated PIC18F2620 on the daughter board). If we can develop a very simple interface circuit and firmware to implement the digital mode modulations as discussed, then I'd extend that daughter board to also plug into the ATS band module socket so that the new exciter could be on the same interface board.

Joe
W3JDR

----- Original Message -----
From: Vojtech Bubník
To: AT_Sprint@yahoogroups.com
Sent: Friday, February 09, 2007 2:22 AM
Subject: Re: [AT_Sprint] ATS3 and portable digital modes

If the transceiver is used just as a modem for digital modes, phasing exciter seems to be attractive, because the master computer may provide the 90 grades phase shifted baseband signal already. But the AF phase shifter will be needed for standalone SSB anyway.

The phasing exciter needs a quadrature local oscillator. If the transceiver is multiband and is not constrained to a narrow subbands, the RC phasing is too narrow band. My friend Peter OK1XGL actually did some tests and one RC phasing was not exact enough for the whole 80M SSB subband. The option is to run the oscillator 4x faster and divide it, for 10M band

you will end up running the oscillator at 112MHz. If you use a DDS, you would either have to use two of them, or use a DDS with a quadrature output, or you will need something clocked at 300MHz, which will not be power efficient anymore.

I built an 80m phasing receiver with two NE612 mixers, RC LO phasing and an AF CW filter. It works well, but was quite difficult to debug. The main problem is huge AF amplification and resulting AF loopbacks, and leakage of the LO outside the TRX , modulating of the LO on the power supply rectifier diodes and receiving back the 50Hz AM modulated signal.

If the first mixer gets overloaded as it is usuall at 40M in Europe, it will AM demodulate the strongest signals. In case of superhet the AF products will be clipped by the IF filter. This is a great advantage if active mixers are used. On the contrary, the AM demodulated signals will be heard in the phasing receiver.

So generally it is easier and more straightforward to build a superhet than a phasing TRX. But anyway, IMHO for portable digital QRP operation the direct modulating of the DDS ist the way and only slight circuit modifications will be needed for ATS3 - bigger AM modulated PA, serial interface to a master computer.

73, Vojtech OK1IAK

952. Re: [AT_Sprint] ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-09 12:46:43 UTC
From: Joe Rocci
Topic: 905 Message: 952

More on this...

It seems to me that any amplitude envelope that the common digital modes exhibit (eg, PSK31) is a by-product of the slew-rate-limited phase transition which is a necessity in order to contain the spectral sideband energy. Therefore, I don't think you have to intentionally modulate the envelope to develop these spectrally-contained phase modulations, you just have to make the 180 deg phase transition (PSK31 case) in a smooth, continuous, time-limited manner. This could be accomplished entirely in the DDS by 'ramping' the phase offset register in as many fine steps as are available over the prescribed time interval and according to a prescribed curve. This isn't a perfect solution, as the number of steps in the phase register is finite, but it would probably be sufficient for QRP work. One of our mathematically inclined colleagues needs to comment on this.

Joe
W3JDR

----- Original Message -----
From: Joe Rocci
To: AT_Sprint@yahoogroups.com
Sent: Friday, February 09, 2007 5:58 AM
Subject: Re: [AT_Sprint] ATS3 and portable digital modes

Vojtech,

My comments about implementing a phasing exciter were somewhat accademic, as I'd prefer to implement digital-mode modulation right at the DDS and the final amp if possible. However, I do want to re-emphasize my point that implementing a good phasing exciter is somewhat easier than implementing a good phasing receiver. To your point about RC phasing networks, they can actually be a good choice under some circumstances. This is because a pair of RC "L" networks, one the inverse form of the other, will develop a 90 deg output-voltage phase relationship at all frequencies - only the amplitude relationship changes. In theory, this can be remedied with a pair of ideal zero-axis limiters (assuming sine wave), but the limiter design imposes other broadband challenges. A simpler approach would be to do something with a lookup table in the micro and a digipot to fix the amplitude variations. But enough of this - back to the discussion we were having.

Can you describe in further detail how you'd propose to send the digital data stream over, say, an asynchronous connection such as RS-232? How would you multiplex the phase information with the envelolope information and how would you seperate them at the Tx end of the link? Can you propose a protocol to also multiplex rig control information on the same serial link? If we can agree on a method, we can begin to exchange some hardware block diagrams, which will lead to schematics and a PCB.

As I said in a previous email, I was already working on an "enhancement" daughter board that would plug into the ATS programming header in order to implement remote computer-based rig control. That design also implemented remote volume control and provision for

firmware-driven RF AGC of the receiver (there's a dedicated PIC18F2620 on the daughter board). If we can develop a very simple interface circuit and firmware to implement the digital mode modulations as discussed, then I'd extend that daughter board to also plug into the ATS band module socket so that the new exciter could be on the same interface board.

Joe
W3JDR

----- Original Message -----
From: Vojtech Bubník
To: AT_Sprint@yahoogroups.com
Sent: Friday, February 09, 2007 2:22 AM
Subject: Re: [AT_Sprint] ATS3 and portable digital modes

If the transceiver is used just as a modem for digital modes, phasing exciter seems to be attractive, because the master computer may provide the 90 grades phase shifted baseband signal already. But the AF phase shifter will be needed for standalone SSB anyway.

The phasing exciter needs a quadrature local oscillator. If the transceiver is multiband and is not constrained to a narrow subbands, the RC phasing is too narrow band. My friend Peter OK1XGL actually did some tests and one RC phasing was not exact enough for the whole 80M SSB subband. The option is to run the oscillator 4x faster and divide it, for 10M band you will end up running the oscillator at 112MHz. If you use a DDS, you would either have to use two of them, or use a DDS with a quadrature output, or you will need something clocked at 300MHz, which will not be power efficient anymore.

I built an 80m phasing receiver with two NE612 mixers, RC LO phasing and an AF CW filter. It works well, but was quite difficult to debug. The main problem is huge AF amplification and resulting AF loopbacks, and leakage of the LO outside the TRX , modulating of the LO on the power supply rectifier diodes and receiving back the 50Hz AM modulated signal.

If the first mixer gets overloaded as it is usuall at 40M in Europe, it will AM demodulate the strongest signals. In case of superhet the AF products will be clipped by the IF filter. This is a great advantage if active mixers are used. On the contrary, the AM demodulated signals will be heard in the phasing receiver.

So generally it is easier and more straightforward to build a superhet than a phasing TRX. But anyway, IMHO for portable digital QRP operation the direct modulating of the DDS ist the way and only slight circuit modifications will be needed for ATS3 - bigger AM modulated PA, serial interface to a master computer.

73, Vojtech OK1IAK

953. Re: [AT_Sprint] ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-09 15:13:39 UTC
From: Vojtěch Bubník
Topic: 905 Message: 953

> It seems to me that any amplitude envelope that the common digital modes exhibit
> (eg, PSK31) is a by-product of the slew-rate-limited phase transition which is a
> necessity in order to contain the spectral sideband energy.

It is not. The signal is artificially AM modulated. Look into any source code of a PSK31 modulator. And the AM envelope is really needed by an usual PSK31 decoder to extract sync.

Slowly changing phase from 0 to 180 grades does not modify the amplitude. Phase and FM modulations are very similar, there is a transformation of the baseband signal to convert phase modulation to FM and vice versa. And I think we agree that FM is a constant envelope modulation.

73, Vojtech OK1IAK

954. Re: [AT_Sprint] ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-09 15:52:40 UTC
From: Joe Rocci
Topic: 905 Message: 954

You're right!

I guess my reasoning was corrupted by thinkinkg about how you'd implement it with a linear hardware modulator (eg, a double balanced mixer). As the modulating voltage is varied through the point where the 180 degree phase transition occurs, the envelope also decreases to zero and then back up to full amplitude. Obviously a purely digital phase modulator doesn't do this (unless it is followed by a narrow bandpass filter)....stupid me!

However, the complex modulation could still be accomplished entirely in the DDS by putting a digipot in the DDS's DAC current control and using it to adjust the DDS output level during the phase transition. Of course then you'd have to deal with inefficient linear post-amplifiers after the DDS, but I'm not sure you'd be a whole lot worse off than if you tried to implement envelope control at the final amplifier. To preserve the amplitude modulation component in the latter case, you'd need to modulate the supply voltage to the final with a linearly variable switch, and a lot of DC power will be burned up during the slow switch transitions where the switch is neither off nor on. If linear amplifiers are used, one might improve efficiency somewhat by developing a post-amplifier that's only linear during the amplitude transitions, and is rebiased to a more efficient mode during the high or low state of a symbol.

Joe

----- Original Message -----
From: Vojtìch Bubník
To: AT_Sprint@yahoogroups.com
Sent: Friday, February 09, 2007 10:13 AM
Subject: Re: [AT_Sprint] ATS3 and portable digital modes

> It seems to me that any amplitude envelope that the common digital modes exhibit
> (eg, PSK31) is a by-product of the slew-rate-limited phase transition which is a
> necessity in order to contain the spectral sideband energy.

It is not. The signal is artificially AM modulated. Look into any source code of a PSK31 modulator. And the AM envelope is really needed by an usual PSK31 decoder to extract sync.

Slowly changing phase from 0 to 180 grades does not modify the amplitude. Phase and FM modulations are very similar, there is a transformation of the baseband signal to convert phase modulation to FM and vice versa. And I think we agree that FM is a constant envelope modulation.

73, Vojtech OK1IAK

955. Re: [AT_Sprint] ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-09 16:02:40 UTC
From: Joe Rocci
Topic: 905 Message: 955

And the AM envelope is really needed by an usual PSK31 decoder to extract sync.

After thinking about this, I'm not convinced it's an issue. Even if the 180 deg phase shift is done purely digitally and without an apparent envelope, an amplitude varying envelope will develop after the signal is bandlimited by the receiver's IF filters and by any pre-detection DSP bandpass filtering done in the software system.

Joe

956. Re: [AT_Sprint] Re: ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-09 18:24:30 UTC
From: Roland Whitsitt
Topic: 905 Message: 956

Hi Tim,
I'm waiting for the FCC to let us do CW on 60m, then I plan on getting serious about it. Also, I've noticed that some countries are allowing thier amateurs on 137 Mhz. I'd like to try that too as I've recently been having fun on 160 meters, tho not at qrp levels but still via my k2 so for me, it still counts 'cause I built it. hi hi
73's Roland N5VWN
----- Original Message -----
From: Tim Keene
To: AT_Sprint@yahoogroups.com
Sent: Thursday, February 08, 2007 8:13 PM
Subject: [AT_Sprint] Re: ATS3 and portable digital modes

My vote is for a 60m ssb rig. It's a very cool band and generally has a very nice 500 mile radius of coverage. If you folks have not tried it yet you should.
Tim K5DEZ

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
>
> Its irronic that digital modes are most easily implemented with an analog
> rig<G>
>
> Keep in mind I do plan on doing a SMT SSB rig at some point. It won't be as
> small as the ATS rigs, to a large extent due to the space requirements of
> the linear amplifier.
>
>

957. Soldering methods for ATS-3a -Thanks

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-10 04:31:29 UTC
From: lownslow1601
Topic: 944 Message: 957

Thank you for the discussion and suggestions. I have decided to take Rick Bennett's advice and not use the skillet/oven technique on my ATS3a kit. However, the technique is interesting and I plan to try it out with, for example, the Norcal SMT dummy load kit. When I know exactly how to do it, I may then tackle a larger pc board.

The doofus looks good. Terry, is that a wooden tooth pick on the end? How did you secure it?

I intend to use the solder supplied by Steve for the ATS3a, but I have a roll of Kester Sn63/Pb37, .015 dia., solder without flux. Would it be advisable to use this solder with SMDs with a small amount of paste flux on the pads?

73, Dave K1YHR.

958. Wanted: ATS-3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-12 02:11:40 UTC
From: mlangenf
Topic: 958 Message: 958

I hesitated (worried about my bifocals and lack of SMT experience) when Steve announced the last run of ATS-3A kits, and now regret it. Thus, I am hopeful somone on the list can help me find an ATS-3A. If so, please contact me off list. While I would prefer a nicely built and problem-free rig, I will also consider a complete, unassembled kit (and then go in search of an SMT Elmer).

Many thanks and 73,

Mark -- WA9ETW

mlangen@...

959. Re: [AT_Sprint] ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-12 07:21:31 UTC
From: Vojtěch Bubník
Topic: 905 Message: 959

Hi Joe.

> Can you describe in further detail how you'd propose to send the digital data
> stream over, say, an asynchronous connection such as RS-232? How would you
> multiplex the phase information with the envelolope information and how would
> you seperate them at the Tx end of the link? Can you propose a protocol to also
> multiplex rig control information on the same serial link?

I do not have a protocol design on paper or electrons yet.

The first solution - only receiving a sound card generated serial stream - is much easier. The amplitude is generated by one channel, the phase or frequency modulation commands by the other channel. The sound serial data would be synchronized exacty and no additional work would be needed at the side of the TRX. The TRX would only need to receive the modulation command, translate it to a DDS word and feed it to the DDS instantly. There will be additional commands to set the main tuning word and key the transceiver. The firmware would not need to know and maintain modulation clock.

If the transceiver is driven by an asynchronous serial port (RS232 or USB), it would not be possible to derive modulation speed from the serial stream anymore and the firmware would need to maintain its modulation clock. The symbol speed would have to be sent to the transceiver at the start of the transmition. The transceiver would have to keep buffer of comands to accomodate to the jitter caused by the higher level OS (Windows, Linux). Additionaly, the transciever would either have to keep amplitude envelopes flashed in the firmware, or it would have to receive them from the master computer and store them in RAM/Flash.

If I have to propose a protocol, I would probably design a simple framing 8bit protocol with FE as a frame start, FF as a frame end, first byte after FE would be a command, the other bytes in the frame would be optional. An escape character FD will be used to translate FE and FF into FD00 and FD01 inside the frame.

Commands
00 - key off
01 - key on
02 followed by the 8 DDS bytes to program main DDS frequency.
03-66 would be reserved for modulating maximum 64 mfsk tones
67-70 for modulating phase changes 0, 90, 180, 270
71 followed by a phase increment to program frequency shift for mfsk modes
72 followed by a modulation time increment, in clock cycles of the TRX firmware
73 followed by an envelope shape to store the envelope somewhere on the TRX CPU
74 to to select one of the flashed envelopes
etc.

The simple commands like keying and modulation would be 3 bytes long. For the sound card clocked modulation the commands 72 - 74 will not be needed.

> As I said in a previous email, I was already working on an "enhancement"
> daughter board that would plug into the ATS programming header in order to
> implement remote computer-based rig control. That design also implemented remote
> volume control and provision for firmware-driven RF AGC of the receiver (there's
> a dedicated PIC18F2620 on the daughter board). If we can develop a very simple
> interface circuit and firmware to implement the digital mode modulations as
> discussed, then I'd extend that daughter board to also plug into the ATS band
> module socket so that the new exciter could be on the same interface board.

Please share the schematic diagram with us.

Thanks, Vojtech OK1IAK

960. Re: [AT_Sprint] ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-12 07:29:22 UTC
From: Vojtěch Bubník
Topic: 905 Message: 960

Hi Joe.

> However, the complex modulation could still be accomplished entirely in the DDS
> by putting a digipot in the DDS's DAC current control and using it to adjust the
> DDS output level during the phase transition.

My friend Peter OK1XGL proposed something similar. The DDS's DAC current control may be driven by the firmware PWM or D/A.

> with inefficient linear post-amplifiers after the DDS, but I'm not sure you'd be
> a whole lot worse off than if you tried to implement envelope control at the
> final amplifier. To preserve the amplitude modulation component in the latter
> case, you'd need to modulate the supply voltage to the final with a linearly
> variable switch, and a lot of DC power will be burned up during the slow switch
> transitions where the switch is neither off nor on. If linear amplifiers are
> used, one might improve efficiency somewhat by developing a post-amplifier
> that's only linear during the amplitude transitions, and is rebiased to a more
> efficient mode during the high or low state of a symbol.

I am not that good at circuits to judge that. There were proposals to AM modulate an E-class PA. That will probably be more power efficient than modulating the DDS's DAC current control and using linear PA, but the second solution will be simpler, lot easier to set up and wideband. If a new transceiver have to be designed, I would prefer the second solution.

73, Vojtech OK1IAK

961. Re: [AT_Sprint] ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-12 07:38:52 UTC
From: Vojtěch Bubník
Topic: 905 Message: 961

> And the AM envelope is really needed by an usual PSK31 decoder to extract sync.
> -------------
>
> After thinking about this, I'm not convinced it's an issue. Even if the 180 deg
> phase shift is done purely digitally and without an apparent envelope, an
> amplitude varying envelope will develop after the signal is bandlimited by the
> receiver's IF filters and by any pre-detection DSP bandpass filtering done in
> the software system.

If the phase is shifted abruptly without AM modulating its evelope, the transceiver would generate a signal tens of kHz wide. It seems to me correct, that after the signal is filtered by the receiver and by the narrow digital filters in the software, the amplitude envelope will be recovered. But you do not need to be that rough to the other hams sharing the band with you. If you key the transmitter off before the phase reversal and key on just after the phase reversal, the effect will be the same and you will not waste that much bandwidth.

If you vary the phase slowly, it will be kind of a gmsk modulation, see
http://en.wikipedia.org/wiki/Gaussian_minimum_shift_keying
MMVARI supports that mode. An usual BPSK31 decoder will not be able to sync to this signal.

73, Vojtech OK1IAK

962. Re: [AT_Sprint] ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-12 12:58:47 UTC
From: Joe Rocci
Topic: 905 Message: 962

The first solution - only receiving a sound card generated serial stream - is much easier. The amplitude is generated by one channel, the phase or frequency modulation commands by the other channel. The sound serial data would be synchronized exacty and no additional work would be needed at the side of the TRX. The TRX would only need to receive the modulation command, translate it to a DDS word and feed it to the DDS instantly. There will be additional commands to set the main tuning word and key the transceiver. The firmware would not need to know and maintain modulation clock.

Vojtech,

Let's go with this idea for a while....
In the audio channel that contains the data.....how do you intend to encode the transmitted data in the sound card audio output? Will it be an /off keying of the 22KHz (or 44 KHz) clock, or will it be actual baseband data? Assuming low symbol-rate data, the former would be easier to handle as all that would be necessary in the hardware is an audio envelope detector and a slicer. If the latter is employed (baseband data), then we get back to possible problems with baseline shift (especially considering output volume control settings), unless you scramble the data or use an encoding method that has no DC component (eg, Manchester). More work for the local processor to do too. Same question goes for the envelope control channel - is the envelope switching information conveyed by presence/absence of an audio tone, or is it encoded in some data format?

The idea of a separate audio channel to control envelope switching puzzles me. Why doesn't the local processor, knowing which mode it's in, just set the carrier phase/frequency, ramp the carrier on according to the prescribed turn-on function, turn the carrier off according the same function, set the phase/frequency for the next symbol, etc? The sequence of commands from the host is:

1) Send desired RF transmitting frequency
2) Send desired mode (BPSK, MFSK, etc)
3) Send start-of-transmission command (enter Tx mode)
4) Send all the symbols in the message stream as described above
5) Send end-of transmission command (return to Rx mode)

The lookup tables for the the mode settings and the carrier turn-on/turn-off function could be hard coded in firmware or they could be downloadable.

Also, the above sequence could just as well be sent over an async serial channel such as a COM port.

Joe
W3JDR

----- Original Message -----
From: Vojtìch Bubník
To: AT_Sprint@yahoogroups.com

Sent: Monday, February 12, 2007 2:21 AM
Subject: Re: [AT_Sprint] ATS3 and portable digital modes

Hi Joe.

> Can you describe in further detail how you'd propose to send the digital data
> stream over, say, an asynchronous connection such as RS-232? How would you
> multiplex the phase information with the envelolope information and how would
> you seperate them at the Tx end of the link? Can you propose a protocol to also
> multiplex rig control information on the same serial link?

I do not have a protocol design on paper or electrons yet.

The first solution - only receiving a sound card generated serial stream - is much easier. The amplitude is generated by one channel, the phase or frequency modulation commands by the other channel. The sound serial data would be synchronized exacty and no additional work would be needed at the side of the TRX. The TRX would only need to receive the modulation command, translate it to a DDS word and feed it to the DDS instantly. There will be additional commands to set the main tuning word and key the transceiver. The firmware would not need to know and maintain modulation clock.

If the transceiver is driven by an asynchronous serial port (RS232 or USB), it would not be possible to derive modulation speed from the serial stream anymore and the firmware would need to maintain its modulation clock. The symbol speed would have to be sent to the transceiver at the start of the transmition. The transceiver would have to keep buffer of comands to accomodate to the jitter caused by the higher level OS (Windows, Linux). Additionaly, the transciever would either have to keep amplitude envelopes flashed in the firmware, or it would have to receive them from the master computer and store them in RAM/Flash.

If I have to propose a protocol, I would probably design a simple framing 8bit protocol with FE as a frame start, FF as a frame end, first byte after FE would be a command, the other bytes in the frame would be optional. An escape character FD will be used to translate FE and FF into FD00 and FD01 inside the frame.

Commands
00 - key off
01 - key on
02 followed by the 8 DDS bytes to program main DDS frequency.
03-66 would be reserved for modulating maximum 64 mfsk tones
67-70 for modulating phase changes 0, 90, 180, 270
71 followed by a phase increment to program frequency shift for mfsk modes
72 followed by a modulation time increment, in clock cycles of the TRX firmware
73 followed by an envelope shape to store the envelope somewhere on the TRX CPU
74 to to select one of the flashed envelopes
etc.

The simple commands like keying and modulation would be 3 bytes long. For the sound card clocked modulation the commands 72 - 74 will not be needed.

> As I said in a previous email, I was already working on an "enhancement"
> daughter board that would plug into the ATS programming header in order to

> implement remote computer-based rig control. That design also implemented remote
> volume control and provision for firmware-driven RF AGC of the receiver (there's
> a dedicated PIC18F2620 on the daughter board). If we can develop a very simple
> interface circuit and firmware to implement the digital mode modulations as
> discussed, then I'd extend that daughter board to also plug into the ATS band
> module socket so that the new exciter could be on the same interface board.

Please share the schematic diagram with us.

Thanks, Vojtech OK1IAK

963. Re: [AT_Sprint] ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-12 14:40:33 UTC
From: Joe Rocci
Topic: 905 Message: 963

>>>Please share the schematic diagram with us.

I set up a folder titled "W3JDR" in the files section. In that folder is a file named "W3JDR ATS-3A Enhancement Board.pdf" containing the block diagram of the design I have underway.

Joe
W3JDR

----- Original Message -----
From: Vojtich Bubník
To: AT_Sprint@yahoogroups.com
Sent: Monday, February 12, 2007 2:21 AM
Subject: Re: [AT_Sprint] ATS3 and portable digital modes

Hi Joe.

> Can you describe in further detail how you'd propose to send the digital data
> stream over, say, an asynchronous connection such as RS-232? How would you
> multiplex the phase information with the envelolope information and how would
> you seperate them at the Tx end of the link? Can you propose a protocol to also
> multiplex rig control information on the same serial link?

I do not have a protocol design on paper or electrons yet.

The first solution - only receiving a sound card generated serial stream - is much easier. The amplitude is generated by one channel, the phase or frequency modulation commands by the other channel. The sound serial data would be synchronized exacty and no additional work would be needed at the side of the TRX. The TRX would only need to receive the modulation command, translate it to a DDS word and feed it to the DDS instantly. There will be additional commands to set the main tuning word and key the transceiver. The firmware would not need to know and maintain modulation clock.

If the transceiver is driven by an asynchronous serial port (RS232 or USB), it would not be possible to derive modulation speed from the serial stream anymore and the firmware would need to maintain its modulation clock. The symbol speed would have to be sent to the transceiver at the start of the transmition. The transceiver would have to keep buffer of comands to accomodate to the jitter caused by the higher level OS (Windows, Linux). Additionaly, the transciever would either have to keep amplitude envelopes flashed in the firmware, or it would have to receive them from the master computer and store them in RAM/Flash.

If I have to propose a protocol, I would probably design a simple framing 8bit protocol with FE as a frame start, FF as a frame end, first byte after FE would be a command, the other bytes in the frame would be optional. An escape character FD will be used to translate FE and FF into FD00 and FD01 inside the frame.

Commands
00 - key off
01 - key on
02 followed by the 8 DDS bytes to program main DDS frequency.
03-66 would be reserved for modulating maximum 64 mfsk tones
67-70 for modulating phase changes 0, 90, 180, 270
71 followed by a phase increment to program frequency shift for mfsk modes
72 followed by a modulation time increment, in clock cycles of the TRX firmware
73 followed by an envelope shape to store the envelope somewhere on the TRX CPU
74 to to select one of the flashed envelopes
etc.

The simple commands like keying and modulation would be 3 bytes long. For the sound card clocked modulation the commands 72 - 74 will not be needed.

> As I said in a previous email, I was already working on an "enhancement"
> daughter board that would plug into the ATS programming header in order to
> implement remote computer-based rig control. That design also implemented remote
> volume control and provision for firmware-driven RF AGC of the receiver (there's
> a dedicated PIC18F2620 on the daughter board). If we can develop a very simple
> interface circuit and firmware to implement the digital mode modulations as
> discussed, then I'd extend that daughter board to also plug into the ATS band
> module socket so that the new exciter could be on the same interface board.

Please share the schematic diagram with us.

Thanks, Vojtech OK1IAK

964. Re: ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-12 14:56:09 UTC
From: Vojtech Bubnik
Topic: 905 Message: 964

Hi Joe.

Good news first. Ron Pfeiffer N1ZSW donated his ATS-3A for my Pocket PC / DDS experiments! Thanks a lot, Ron!

> In the audio channel that contains the data.....how do you intend to encode the transmitted data in the sound card audio output? Will it be an /off keying of the 22KHz (or 44 KHz) clock, or will it be actual baseband data?

Baseband data. I once tried to generate random digital data and feed them back to microphone input. I sent every value twice. The data looked digital enough. But anyway, our discussion is meaningless until it is actually tried. I hope to experiment with it the second next weekend.

> If the latter is employed (baseband data), then we get back to possible problems with baseline shift (especially considering output volume control settings), unless you scramble the data or use an encoding method that has no DC component (eg, Manchester).

The stream will be coded as -1, 1, not 0, 1. The idle value will be 0. There will be enough time between the frames for the sound card output capacitor to discharge to 0.

> Same question goes for the envelope control channel - is the envelope switching information conveyed by presence/absence of an audio tone, or is it encoded in some data format?

Analog, modulated at a high tone. It shall be rectified at the TRX and direct modulate the PA. But I will try first to do just with on/off keying. It shall be good enough for low power PSK31. MFSK16 and Olivia at low speeds shall be good enough with constant envelope. No need to hardware modify ATS-3.

> The idea of a separate audio channel to control envelope switching puzzles me. Why doesn't the local processor, knowing which mode it's in, just set the carrier phase/frequency, ramp the carrier on according to the prescribed turn-on function, turn the carrier off according the same function, set the phase/frequency for the next symbol, etc?

Because I hate programming firmware and I want to keep the firmware as simple as possible. I do not want to program modes into the firmware, but to maintain it at the master computer, which is much easier. The other HAMs will not need to flash firmware when there is a new mode. If someone creates a new TRX for digital modes, I do not expect most

of the HAMs to be excited about buying a programmer to be able to work a new mode.

> Also, the above sequence could just as well be sent over an async serial channel such as a COM port.

Serial port is controlled by the windows or linux driver. There is no guarantee that the bytes are sent exactly at the instant the program sends them to the driver. There is no way for the terminal program to control the data timing. The firmware will have to cache the commands and clock them. This is not needed with the sound card stream.

73, Vojtech OK1IAK

965. Re: [AT_Sprint] Re: ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-12 15:12:36 UTC
From: Joe Rocci
Topic: 905 Message: 965

>The stream will be coded as -1, 1, not 0, 1. The idle value will be 0.
>There will be enough time between the frames for the sound card output
>capacitor to discharge to 0.

This sounds like the old "return to zero" data format. Can you guarantee that a "1" sent to the sound card comes out as "1" and not a "-1", ie, is phase preserved or could there be a possible phase reversal? What's the longest time the data could be in the "1" or "-1" state? Droop in the coupling caps could be an issue if the time is long compared to the low frequency response time of the card's amplifiers.

==========
>Analog, modulated at a high tone. It shall be rectified at the TRX and
>direct modulate the PA.

Charge and discharge times will need to be very fast

==========
>Because I hate programming firmware and I want to keep the firmware as
>simple as possible.

This imposes more of a burden on the hardware. That's even worse

Joe
W3JDR.

----- Original Message -----
From: Vojtech Bubnik
To: AT_Sprint@yahoogroups.com
Sent: Monday, February 12, 2007 9:56 AM
Subject: [AT_Sprint] Re: ATS3 and portable digital modes

Hi Joe.

Good news first. Ron Pfeiffer N1ZSW donated his ATS-3A for my Pocket PC / DDS experiments! Thanks a lot, Ron!

> In the audio channel that contains the data.....how do you intend to encode the transmitted data in the sound card audio output? Will it be an /off keying of the 22KHz (or 44 KHz) clock, or will it be actual baseband data?

Baseband data. I once tried to generate random digital data and feed them back to microphone input. I sent every value twice. The data looked digital enough. But anyway, our discussion is meaningless until it is actually tried. I hope to experiment with it the second next weekend.

> If the latter is employed (baseband data), then we get back to possible problems with baseline shift (especially considering output volume control settings), unless you scramble the data or use an encoding method that has no DC component (eg, Manchester).

The stream will be coded as -1, 1, not 0, 1. The idle value will be 0. There will be enough time between the frames for the sound card output capacitor to discharge to 0.

> Same question goes for the envelope control channel - is the envelope switching information conveyed by presence/absence of an audio tone, or is it encoded in some data format?

Analog, modulated at a high tone. It shall be rectified at the TRX and direct modulate the PA. But I will try first to do just with on/off keying. It shall be good enough for low power PSK31. MFSK16 and Olivia at low speeds shall be good enough with constant envelope. No need to hardware modify ATS-3.

> The idea of a separate audio channel to control envelope switching puzzles me. Why doesn't the local processor, knowing which mode it's in, just set the carrier phase/frequency, ramp the carrier on according to the prescribed turn-on function, turn the carrier off according the same function, set the phase/frequency for the next symbol, etc?

Because I hate programming firmware and I want to keep the firmware as simple as possible. I do not want to program modes into the firmware, but to maintain it at the master computer, which is much easier. The other HAMs will not need to flash firmware when there is a new mode. If someone creates a new TRX for digital modes, I do not expect most of the HAMs to be excited about buying a programmer to be able to work a new mode.

> Also, the above sequence could just as well be sent over an async serial channel such as a COM port.

Serial port is controlled by the windows or linux driver. There is no guarantee that the bytes are sent exactly at the instant the program sends them to the driver. There is no way for the terminal program to control the data timing. The firmware will have to cache the commands and clock them. This is not needed with the sound card stream.

73, Vojtech OK1IAK

966. L6 wire

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-14 03:56:52 UTC
From: dave
Topic: 966 Message: 966

Belatedly getting around to building the ATS-3 (not 3A) that I've had here for a year or two. Got all the SMT stuff mounted and ready to wind L6.

In the kit are two different types of magnet wire, a heavier red coated wire and a lighter gauge brown coated wire. Wondering which the designer intended to use for which toroids.

I'm assuming that since L6 carries a fair amount of current, it should be wound with the heavier wire.

Am I simply overlooking the instructions for which wire was to be used on which toroids? Where is the lighter gauge wire used?

I searched the archives and do not find this mentioned anywhere.

73 de dave
ab9ca

967. Re: QBSA jerky frequency display on high bands

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-14 06:31:21 UTC
From: radio_kx0r
Topic: 847 Message: 967

Steve,

Thanks for reprogramming my MEGA48 chip for my QBSA! I'm delighted to report that the jerky, delayed frequency updates on my display are history, and the QBSA now responds quickly to frequency changes from the ATS-3A on all bands.

I can't believe how fast you fixed this bug, or how quickly you returned my updated chip. This kind of service is rare these days.

For those who may wonder, the QBSA still operates with the MEGA48 chip removed - only the display doesn't work. I thought twice before I tried this. It's cool to have this thing fully functional!

72/73 and thanks again!

George Carey Fuller
KX0R

>
> I finally got a chance to check out the QBSA display update problem.
>
> Turns out if the input frequency to the counter is greater than 6.5532 MHz,
> the display doesn't always update as quick as it should. 6.5532 MHz is the
> point where the 16 bit frequency counter overflows and interupts have to be
> counted. If the counter interupt happens to happen when its checking the
> A/D converter to see if there is transmit power, it can get corrupted
> results and think there is power output and freeze the display when it
> shouldn't.
>
> In thoery, this shouldn't have been a problem and I don't know why it
> happens. Which is why I didn't notice the problem. The power detect was the
> last thing I did to the program and at the time I was only concerned that
> it worked and didn't notice it was affecting the frequency display in a way
> that it shouldn't.

>
> In anyevent, I figured out a solution - turn off the interupts when
it
> checks the A/D converter count, then turn them back on. Glad that
worked,
> because everything else I tried to fix the problem didn't!
>
> So, if you want to have this problem fixed, send me the MEGA48 chip
to
> reprogram. I'll keep the EEPROM data intact so you won't have to do
another
> re-cal. I'll pay for return postage.
>
> It seems there's a little bit of Murphy in everything we do...
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://www.qsl.net/kd1jv/
> http://kd1jv.qrpradio.com
>

968. Re: ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-14 07:52:17 UTC
From: jgaffke
Topic: 905 Message: 968

Howdy All,

I'm interested in implementing PSK31 on the ATS3A. This mode seems most in line with low power operation using a minimum of equipment. I think we should be able to shoehorn an entire PSK31 station into that Altoids tin, running it all on the MSP430. It may be that the only hardware mod required is that of substituting in the 28 pin MSP430F1232 as described below.

I started a thread than ran Oct/Nov 2006 on the qrp-l list titled "PSK31 on a uC". I've now posted C code for the decoder algorithm described in that thread, look for KE7ER_pskuc.c in our files section. Should compile with most any C compler under 40 years old, takes no input, and output is all printf's to the console. Simulates 10 bit 4 KHz audio sampling of a PSK31 transmission coming in at 500 Hz while a competing PSK31 station at 4 times the power sweeps through from 400 to 600 Hz. Does it with 16 bit adds and shifts. With 32 bit arithmetic, it can handle over 24 bits per sample.

Monitoring receiver audio plus a switchable 500 Hz reference should be sufficient to replace the waterfall display. The firmware would have special hunt and fine tuning enhancements, and once locked the algorithm nudges the DDS to follow signal drift.

I expect transmission to be easy. For truly portable operation, the operater could use the Morse paddle to key in a message, the MSP430 converts to Varicode and twiddles register bits in the DDS to flip the phase of the transmitted RF appropriately. Use of canned messages from flash will speed things up. Received messages could be queued up in flash while slowly spilling out through the headphones as Morse. Those impatient with Morse reception could mount one of the 2x16 displays with UART from sparkfun.com on the lid, or wait for eInk displays to hit the surplus market.

>I want to extend ATS3 firmware and use the keyer socket as a serial line ...
>73, Vojtech OK1IAK

I'd like to have firmware support for a UART link in/out of the MSP430 via the key jack (or perhaps a dedicated UART jack). This would allow us to type up traffic on a laptop or folding keyboard for transmission (either live, stored on the laptop, or stored in MSP430 flash), log incomming traffic, control the rig, and download new scraps of firmware. The CMOS3.3v to RS232 level shifters could be hidden in the DB9 shell of the phone-plug-to-DB9 cable assembly, no hardware mods to the ATS3A. Converters from USB and bluetooth to RS232 are available.

But an external laptop or keyboard is not required for basic PSK31 operation.

Given the similar baud rates, a good key click filter for CW should work fine for suppressing dirt during PSK transmissions as well, assuming the MSP430 keys the transmitter on and off at appropriate times. With identical keying envelopes, I'd expect clicks on PSK31 transitions to be as bad as CW at twice the power, since PSK inverts the RF waveform with each zero sent. But we need to reduce output power anyway or PSK's continuous duty will smoke the finals. Reducing power also gives a better keying envelope (should probably fix that), as noted by KX0R in the files section. Fair enough if we are limited to half the peak power of CW, we buy that back at the decoder when we can compare 1 vs -1 instead of CW's 1 vs 0. Of course everyone you contact will be staring at your signal in their waterfall display, full of advice on how to clean things up by adjusting your sound card and mike gain.

Though the current key click filter may be good enough for PSK31, we could give the MSP430 more control of the keying envelope. Think of Q4 as a linear voltage regulator feeding the top of L3, the R/C key click filter determines our (often changing) requirements for the output voltage of this regulator. Now replace Q4 with a buck mode switching regulator, and use an op amp adder to subtract the desired output voltage from the actual output of the switcher, sending the result to the switcher's feedback pin. The "desired voltage" would come from a D2A controlled by the MSP430 over the SPI bus (or from a PWM pin), the MSP430 does table lookups of a half cosine wave to determine what to feed the D2A. A buck-boost switcher would be more flexible, but buck mode is safer since the worst it can do is Vbatt into the final.

A stingier approach might be to remove the key click filter caps so Q4 switches instantly, then drive Q3 with 100 KHz PWM from the MSP430's counter/timer. Add a coil, cap, and schottky diode between Q4 and L3 to complete a buck regulator. Might run open loop if constant antenna impedance is assumed (after calibrating at tuneup), or could close the loop by feeding our switcher's output voltage to an A2D on the MSP430.

In any case, the switcher can be completely shut down during recieve to avoid hash. In addition to better envelope shaping, the switcher would add the abililty to efficiently cut peak power when conditions allow, on both CW and PSK31.

Regarding the Medfer Beacon mentioned by W3JDR, that modulator appears to be linear. But it is a good example of PWM from a uC counter/timer being used for envelope shaping.

We will need something more than the current 20 pin MSP430F1121A. Perhaps replacing it with the 28 pin MSP430F1232 is sufficient, the extra 8 pins hanging over mylar tape we add to cover the pushbutton pads (dremel down any protruding pins first, and move C51). The

pinout for the top 20 pins remains identical, so existing firmware should work with no changes. The new part gives us more RAM, more flash, and a 10 bit A2D. Could dead bug an SPI A2D if we want more bits, though the file posted shows impressive results from just 10 bits. Add a wire from received audio to the A2D input plus an RC low pass filter for a DC reference, and the rest is all a matter of firmware.

>YES! Please keep it on list. I for one am interested in the discussion.
>-mike/w1mt

Oh good. ;)

>As I said in a previous email, I was already working on an
>"enhancement" daughter board that would plug into the ATS
>programming header in order ...
>Joe W3JDR

A common way of hooking in a daughterboard would enable lots of experimentation without trashing rigs. I'd use the ATS3A's JTAG and RPAK through-holes to mount the daughterboard, we still need a common but flexible way of bringing in a few more signals like RX_Audio, DDS_LO, T/R, and VBatt. Some electrolytics on the main board could first be replaced with physically smaller chip ceramics, and the RPAK remounted with clipped pins after a socket strip is installed in its position. My daughterboard might include the newer TSSOP-38 MSP430F2274 plus a few peripherals such as a MByte of SPI flash, 20 bit A2D, SWR sensor, SCP1000, beefy final, switcher for that final, digital pot for volume, LiPo charger, ... But without sucking power? As Joe suggests, removing the daughterboard restores stock operation by releasing the old MSP430 RESET line. Normally mount the daughterboard on the exposed side of the main board, but a low profile daughterboard could mount on the button side if it has switches and lights for the front panel. If any features actually work out, we can lobby Steve to roll them into the next main board.

OK, that should be plenty for a first post.

73's
Jerry Gaffke, KE7ER

969. Re: [AT_Sprint] Re: ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-14 10:36:57 UTC
From: Joe Rocci
Topic: 905 Message: 969

Jerry,

Take a look at the block diagram for my enhancement board that I posted in the "W3JDR" folder in the Files section.

Joe
W3JDR

----- Original Message -----
From: jgaffke
To: AT_Sprint@yahoogroups.com
Sent: Wednesday, February 14, 2007 2:52 AM
Subject: [AT_Sprint] Re: ATS3 and portable digital modes

Howdy All,

I'm interested in implementing PSK31 on the ATS3A. This mode seems most in line with low power operation using a minimum of equipment. I think we should be able to shoehorn an entire PSK31 station into that Altoids tin, running it all on the MSP430. It may be that the only hardware mod required is that of substituting in the 28 pin MSP430F1232 as described below.

I started a thread than ran Oct/Nov 2006 on the qrp-l list titled "PSK31 on a uC". I've now posted C code for the decoder algorithm described in that thread, look for KE7ER_pskuc.c in our files section. Should compile with most any C compler under 40 years old, takes no input, and output is all printf's to the console. Simulates 10 bit 4 KHz audio sampling of a PSK31 transmission coming in at 500 Hz while a competing PSK31 station at 4 times the power sweeps through from 400 to 600 Hz. Does it with 16 bit adds and shifts. With 32 bit arithmetic, it can handle over 24 bits per sample.

Monitoring receiver audio plus a switchable 500 Hz reference should be sufficient to replace the waterfall display. The firmware would have special hunt and fine tuning enhancements, and once locked the algorithm nudges the DDS to follow signal drift.

I expect transmission to be easy. For truly portable operation, the operater could use the Morse paddle to key in a message, the MSP430 converts to Varicode and twiddles register bits in the DDS to flip the phase of the transmitted RF appropriately. Use of canned messages from flash will speed things up. Received messages could be queued up in flash while slowly spilling out through the headphones as Morse. Those impatient with Morse reception could mount one of the 2x16 displays with UART from sparkfun.com on the lid, or wait for eInk displays to hit the surplus market.

>I want to extend ATS3 firmware and use the keyer socket as a serial line ...
>73, Vojtech OK1IAK

I'd like to have firmware support for a UART link in/out of the MSP430 via the key jack (or perhaps a dedicated UART jack). This would allow us to type up traffic on a laptop or folding keyboard for transmission (either live, stored on the laptop, or stored in MSP430 flash), log incomming traffic, control the rig, and download new scraps of firmware. The CMOS3.3v to RS232 level shifters could be hidden in the DB9 shell of the phone-plug-to-DB9 cable assembly, no hardware mods to the ATS3A. Converters from USB and bluetooth to RS232 are available. But an external laptop or keyboard is not required for basic PSK31 operation.

Given the similar baud rates, a good key click filter for CW should work fine for suppressing dirt during PSK transmissions as well, assuming the MSP430 keys the transmitter on and off at appropriate times. With identical keying envelopes, I'd expect clicks on PSK31 transitions to be as bad as CW at twice the power, since PSK inverts the RF waveform with each zero sent. But we need to reduce output power anyway or PSK's continuous duty will smoke the finals. Reducing power also gives a better keying envelope (should probably fix that), as noted by KX0R in the files section. Fair enough if we are limited to half the peak power of CW, we buy that back at the decoder when we can compare 1 vs -1 instead of CW's 1 vs 0. Of course everyone you contact will be staring at your signal in their waterfall display, full of advice on how to clean things up by adjusting your sound card and mike gain.

Though the current key click filter may be good enough for PSK31, we could give the MSP430 more control of the keying envelope. Think of Q4 as a linear voltage regulator feeding the top of L3, the R/C key click filter determines our (often changing) requirements for the output voltage of this regulator. Now replace Q4 with a buck mode switching regulator, and use an op amp adder to subtract the desired output voltage from the actual output of the switcher, sending the result to the switcher's feedback pin. The "desired voltage" would come from a D2A controlled by the MSP430 over the SPI bus (or from a PWM pin), the MSP430 does table lookups of a half cosine wave to determine what to feed the D2A. A buck-boost switcher would be more flexible, but buck mode is safer since the worst it can do is Vbatt into the final.

A stingier approach might be to remove the key click filter caps so Q4 switches instantly, then drive Q3 with 100 KHz PWM from the MSP430's counter/timer. Add a coil, cap, and schottky diode between Q4 and L3 to complete a buck regulator. Might run open loop if constant antenna impedance is assumed (after calibrating at tuneup), or could close the loop by feeding our switcher's output voltage to an A2D on the MSP430.

In any case, the switcher can be completely shut down during recieve to avoid hash. In addition to better envelope shaping, the switcher would add the abililty to efficiently cut peak power when conditions allow, on both CW and PSK31.

Regarding the Medfer Beacon mentioned by W3JDR, that modulator appears to be linear. But it is a good example of PWM from a uC counter/timer being used for envelope shaping.

We will need something more than the current 20 pin MSP430F1121A. Perhaps replacing it with the 28 pin MSP430F1232 is sufficient, the extra 8 pins hanging over mylar tape we add to cover the pushbutton pads (dremel down any protruding pins first, and move C51). The pinout for the top 20 pins remains identical, so existing firmware should work with no changes. The new part gives us more RAM, more flash, and a 10 bit A2D. Could dead bug an SPI A2D if we want more bits, though the file posted shows impressive results from just 10 bits. Add a wire from received audio to the A2D input plus an RC low pass filter for a DC reference, and the rest is all a matter of firmware.

>YES! Please keep it on list. I for one am interested in the discussion.
>-mike/w1mt

Oh good. ;)

>As I said in a previous email, I was already working on an
>"enhancement" daughter board that would plug into the ATS
>programming header in order ...
>Joe W3JDR

A common way of hooking in a daughterboard would enable lots of experimentation without trashing rigs. I'd use the ATS3A's JTAG and RPAK through-holes to mount the daughterboard, we still need a common but flexible way of bringing in a few more signals like RX_Audio, DDS_LO, T/R, and VBatt. Some electrolytics on the main board could first be replaced with physically smaller chip ceramics, and the RPAK remounted with clipped pins after a socket strip is installed in its position. My daughterboard might include the newer TSSOP-38 MSP430F2274 plus a few peripherals such as a MByte of SPI flash, 20 bit A2D, SWR sensor, SCP1000, beefy final, switcher for that final, digital pot for volume, LiPo charger, ... But without sucking power? As Joe suggests, removing the daughterboard restores stock operation by releasing the old MSP430 RESET line. Normally mount the daughterboard on the exposed side of the main board, but a low profile daughterboard could mount on the button side if it has switches and lights for the front panel. If any features actually work out, we can lobby Steve to roll them into the next main board.

OK, that should be plenty for a first post.

73's
Jerry Gaffke, KE7ER

970. Re: L6 wire

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-14 14:25:34 UTC
From: Bruce Beford
Topic: 966 Message: 970

Yes Dave, use the heavier wire for L6. Looking through my copies of the manual, I don't see specific instructions regarding the wire gauges, except on the page for the filter boards. There, the chart for the filters shows #24ga for L1/2 in the 80M column. This should be the same for all the filter boards.

I built my ATS3 a long time ago, I don't know if changes to the specific wire Steve included took place in later kittings, but all my filter boards are wound with red enameled wire. They all appear to be of the same gauge as well. If you only have a relatively small amount of the larger gauge- then that is for the RFC, L6 only. I suspect rest of the filter toroids should be wound with the smaller wire.

GL,
Bruce N1RX

--- In AT_Sprint@yahoogroups.com, "dave" <hound_113@...> wrote:
>
>
> Belatedly getting around to building the ATS-3 (not 3A) that I've had
> here for a year or two. Got all the SMT stuff mounted and ready to
> wind L6.
>
> In the kit are two different types of magnet wire, a heavier red
> coated wire and a lighter gauge brown coated wire. Wondering which
> the designer intended to use for which toroids.
>
> I'm assuming that since L6 carries a fair amount of current, it should
> be wound with the heavier wire.
>
> Am I simply overlooking the instructions for which wire was to be used
> on which toroids? Where is the lighter gauge wire used?
>
> I searched the archives and do not find this mentioned anywhere.
>
>
> 73 de dave
> ab9ca
>

971. Re: L6 wire

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-14 16:29:54 UTC
From: dave
Topic: 966 Message: 971

Bruce,

Thanks for the note. After thinking about it overnite I decided that the finer gauge wire was most likely for the high count toroids for the 80m board. After a more careful look at the filter board instruction sheet I see the notes about wire gauge there . . . duh . . .

Unfortunately it looks like those notes are printed with a color background. My laser printer prints those backgrounds as nearly black, making it tough to see that one note says #28 and the others say #26. Might be better to simply outline or bold or italic those notes rather than use a colored background. Not everyone has a color printer.

At any rate thanks for your help - got me going the right direction.

73 de dave
ab9ca

--- In AT_Sprint@yahoogroups.com, "Bruce Beford" <bruce.beford@...> wrote:
>
> Yes Dave, use the heavier wire for L6. Looking through my copies of
> the manual, I don't see specific instructions regarding the wire
> gauges, except on the page for the filter boards. There, the chart
> for the filters shows #24ga for L1/2 in the 80M column. This should
> be the same for all the filter boards.
>
> I built my ATS3 a long time ago, I don't know if changes to the
> specific wire Steve included took place in later kittings, but all my
> filter boards are wound with red enameled wire. They all appear to be
> of the same gauge as well. If you only have a relatively small amount
> of the larger gauge- then that is for the RFC, L6 only. I suspect
> rest of the filter toroids should be wound with the smaller wire.
>
> GL,
> Bruce N1RX
>
> --- In AT_Sprint@yahoogroups.com, "dave" <hound_113@> wrote:
> >
> >
> > Belatedly getting around to building the ATS-3 (not 3A) that I've
> had
> > here for a year or two. Got all the SMT stuff mounted and ready to
> > wind L6.
> >
> > In the kit are two different types of magnet wire, a heavier red

> > coated wire and a lighter gauge brown coated wire. Wondering which
> > the designer intended to use for which toroids.
> >
> > I'm assuming that since L6 carries a fair amount of current, it
> should
> > be wound with the heavier wire.
> >
> > Am I simply overlooking the instructions for which wire was to be
> used
> > on which toroids? Where is the lighter gauge wire used?
> >
> > I searched the archives and do not find this mentioned anywhere.
> >
> >
> > 73 de dave
> > ab9ca
> >
>

972. Re: [AT_Sprint] Re: ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-14 20:11:55 UTC
From: Vojtěch Bubník
Topic: 905 Message: 972

Hi Jerry.

I read the thread at QRP-L. Just one remark to the old conversation. Accumulating PSK changes over 1 second may be contraproductive, because the ionosphere modulates phase of the signal slowly. In some cases it is better to actually increase symbol rate from 31 to 63 to make the phase changes bigger than what ionosphere does. Multitone modes like MFSK16 or Olivia are much better if the ionosphere is not that close to an additional gaussian noise only.

I wonder how easy it would be to "zero beat" a PSK31 signal to an aux 500Hz tone with the precission of 10Hz. I am affraid that the ones without musical ears will not be able to do that. I propose to extend your program to simulate it and ask couple of friends to try to tune into real signals.

I agree with all in your last message. Everything that you described is certainly feasible. It only needs to be done. While I love revolution, I think that for a hobby project a slow evolution is more feasible. My time is constrained and my goals must be constrained as well. And I aside of the digimode ATS-3 project I have the PocketDigi project to maintain and improve.

I decided to only extend the original firmware of the original ATS-3 to allow modulation of digital modes over serial line. | plan to make the firmware extensions as simple as possible and to keep the complexity at the PC or Pocket PC side. I do not plan to substitute the original microprocessor. I do not plan to modify the PA or add AM modulation of the PA either. To easy the PA I will run the whole transceiver from 6V.

I hope to get the ATS next week, to build the paralell programmer and tinker the firmware a bit soon. In the meantime I read tutorials to MSP430.

If that works, I am open to other evoĺution. I will not help you guys now with developing a new hardware and writing a standalone PSK31 implementation, but I will keep my fingers crossed for you.

> I've now posted C code for the decoder algorithm
> described in that thread, look for KE7ER_pskuc.c in our files section.

I will certainly look at this source code.

> My daughterboard might include the newer TSSOP-38
> MSP430F2274 plus a few peripherals such as a MByte of SPI flash, 20
> bit A2D, SWR sensor, SCP1000, beefy final, switcher for that final,
> digital pot for volume, LiPo charger, ... But without sucking power?

I strongly advocate to keep the hardware simple. I could believe that lot of HAMs develop just for fun and do not mind that only a single prototype of their fine engineering art will be ever built. But I am not one of them and if I invest my time into developing something just for fun. I want it to be duplicated.

This is a lesson I learned last years. My friend Petr OK1XGL developed a fine QRP transceiver of the size of Elecraft K1, with CMOS mixer, extremly high IP3. The transceiver is small, nice, but very complex. If it is not kitted, nobody will ever reproduce it.

I wrote PocketDigi and advocate Pocket PC handhelds for portable digital modes. The device is easy to program, quite cheap and versatile. If you want to build something similar, you will very soon exceed the price of a second hand Pocket PC. And if a software is written for Pocket PC, hundreds of HAMs will certainly use it.

73, Vojtech OK1IAK

973. Re: WTB: ATS-3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-15 03:05:35 UTC
From: mlangenf
Topic: 958 Message: 973

Still looking. If you can help, please reply off list.

Thanks,

Mark -- WA9ETW

--- In AT_Sprint@yahoogroups.com, "mlangenf" <mlangen@...> wrote:
>
> I hesitated (worried about my bifocals and lack of SMT experience) when
> Steve announced the last run of ATS-3A kits, and now regret it. Thus, I
> am hopeful somone on the list can help me find an ATS-3A. If so, please
> contact me off list. While I would prefer a nicely built and problem-
> free rig, I will also consider a complete, unassembled kit (and then
> go in search of an SMT Elmer).
>
> Many thanks and 73,
>
> Mark -- WA9ETW
>
> mlangen@...
>

974. Re: ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-15 06:49:09 UTC
From: jgaffke
Topic: 905 Message: 974

A relatively short one this time.

I created folder KE7ER in the files section, moved pskuc.c
into the folder as there may be related material accumulating.
Made minor fixes to some of the comments in pskuc.c,
code remains the same.

From my post yesterday regarding the PSK31 decoder algorithm:
>replacing it with the 28 pin MSP430F1232..new part gives us more RAM
The MSP430F1232 is still at 256 bytes, should be OK

In file pskuc.c:
>sends alternating ones and zeros (Varicode spaces)
No, not spaces, that would be 001001001...

Joe wrote:
>Take a look at the block diagram for my enhancement board that I
>posted in the "W3JDR" folder in the Files section.
>Joe W3JDR

Most digital modes take much more processing power than the MSP430
has to offer, something like your approach would be required to
implement them. I'm picking off one of the easiest, PSK31.
I think we could have usable PSK31 with a relatively minor
hardware mod to the ATS3A, that of substituting in that 28 pin
MSP430F1232. Once that works (or not), I might look at
daughterboards to extend the capabilites further.

When you build a daughterboard, make it as generic and flexible as
you can in how it mates to the ATS3A. It will be hard to build
one daughterboard that does everything everyone wants over the next
few years. It would be very useful to be able to swap daughterboards
without having to bring out the Xacto knife and soldering iron.

Vojtìch Bubník <bubnikv@...> wrote:
>Accumulating PSK changes over 1 second may be contraproductive,
>because the ionosphere modulates phase of the signal slowly. In some
>cases it is better to actually increase symbol rate from 31 to 63 to
>make the phase changes bigger than what ionosphere does. Multitone
>modes like MFSK16 or Olivia are much better if the ionosphere is not
>that close to an additional gaussian noise only.

Good point. Sounds right.
A slow FSK decoder should be easy enough on the MSP430.
Guess it has to track phase mid-bit, do-able but unfortunate.

>I wonder how easy it would be to "zero beat" a PSK31 signal
>to an aux 500Hz tone with the precission of 10Hz.

I think we can just point the rig nearby and have it slowly
adjust the DDS frequency till it finds something it locks to.

> > My daughterboard might include ....
> I strongly advocate to keep the hardware simple.

My first step is to see if I can get PSK31 running standalone
with no hardware mods other than that 28 pin MSP430F1232
substituted in. No daughterboard required. But it is compelling
to think about playing with some of those toys.

Jerry, KE7ER

975. Re: [AT_Sprint] Re: ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-15 08:45:05 UTC
From: Vojtěch Bubník
Topic: 905 Message: 975

Hi Jerry.

> My first step is to see if I can get PSK31 running standalone
> with no hardware mods other than that 28 pin MSP430F1232
> substituted in. No daughterboard required. But it is compelling
> to think about playing with some of those toys.

Very good. Evolution, that is the way to do a one man show in spare time. I am looking forward to your results.

Just a small wish. While doing the hardware mods, please consider adding battery monitor.

73, Vojtech OK1IAK

976. Re: [AT_Sprint] Re: ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-15 11:14:06 UTC
From: Joe Rocci
Topic: 905 Message: 976

It sounds like we have 3 different simultaneous approaches to acomplish similar but somewhat personalized goals. I think this is great, as the odds are that something useful will probably come of it.

For my part, I will continue to develop an open hardware platform, taking the great suggestions already made into consideration. My expectation (hope?) is that others will develop enhanced firmware once the enhanced hardware is available..

Let's keep the dialog going.

Joe
W3JDR

----- Original Message -----
From: Vojtech Bubník
To: at_sprint@yahoogroups.com
Sent: Thursday, February 15, 2007 3:45 AM
Subject: Re: [AT_Sprint] Re: ATS3 and portable digital modes

Hi Jerry.

> My first step is to see if I can get PSK31 running standalone
> with no hardware mods other than that 28 pin MSP430F1232
> substituted in. No daughterboard required. But it is compelling
> to think about playing with some of those toys.

Very good. Evolution, that is the way to do a one man show in spare time. I am looking forward to your results.

Just a small wish. While doing the hardware mods, please consider adding battery monitor.

73, Vojtech OK1IAK

977. Re: ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-15 14:48:58 UTC
From: w1mt
Topic: 905 Message: 977

You might be able to use the msp430f1132. The only thing you loose over the msp430f1232 is the extra gpio pins. Flash and ram and 10-bit sar are the same, plus the pin out is a one for one direct replacement for the current msp430f1121a.

Might be I missed something but I think this should give you the extra program space you will need. With minimal hardware changing...

-mike/w1mt

--- In AT_Sprint@yahoogroups.com, "jgaffke" <jgaffke@...> wrote:

>
> Most digital modes take much more processing power than the MSP430
> has to offer, something like your approach would be required to
> implement them. I'm picking off one of the easiest, PSK31.
> I think we could have usable PSK31 with a relatively minor
> hardware mod to the ATS3A, that of substituting in that 28 pin
> MSP430F1232. Once that works (or not), I might look at
> daughterboards to extend the capabilites further.
>

978. Re: [AT_Sprint] Re: WTB: ATS-3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-15 15:17:08 UTC
From: Kurt
Topic: 958 Message: 978

You might want to wait for Steve's next project. I missed out
on the ATS-3 and just monitored the group and his webpage.
Eventually something different will evolve. Why he doesn't
do a bigger run escapes me but I suspect he might have been stuck
with leftover kits in the past. Can't blame him for not wanting to
lose money.

Kurt Savegnago

mlangenf wrote:
> Still looking. If you can help, please reply off list.
>
> Thanks,
>
> Mark -- WA9ETW
>
>
> --- In AT_Sprint@yahoogroups.com, "mlangenf" <mlangen@...> wrote:
>
>>I hesitated (worried about my bifocals and lack of SMT experience)
>
> when
>
>>Steve announced the last run of ATS-3A kits, and now regret it.
>
> Thus, I
>
>>am hopeful somone on the list can help me find an ATS-3A. If so,
>
> please
>
>>contact me off list. While I would prefer a nicely built and
>
> problem-
>
>>free rig, I will also consider a complete, unassembled kit (and
>
> then
>
>>go in search of an SMT Elmer).
>>
>>Many thanks and 73,
>>
>>Mark -- WA9ETW
>>

>>mlangen@...
>>
>
>
>
>
>

979. Re: [AT_Sprint] Re: WTB: ATS-3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-15 15:28:47 UTC
From: Mark Langenfeld
Topic: 958 Message: 979

Thanks, Kurt. I'm always interested in what Steve might release next. Rumor has it the next version will include digital freq display and simplified bandswitching. But -- frankly -- I like the ATS-3 for what it is (minimalist but highly capable) and, if I can find one, I would sure like to get on the air with it.

72/73,

Mark -- WA9ETW

> You might want to wait for Steve's next project. I missed out
> on the ATS-3 and just monitored the group and his webpage.
> Eventually something different will evolve. Why he doesn't
> do a bigger run escapes me but I suspect he might have been stuck
> with leftover kits in the past. Can't blame him for not wanting to
> lose money.
>
> Kurt Savegnago
>

--
CoreComm Webmail.
http://home.core.com

980. Re: [AT_Sprint] Re: WTB: ATS-3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-15 15:26:30 UTC
From: BPCI
Topic: 958 Message: 980

Maybe some of us could offer to underwrite another run...

Ci Jones, WU7R
FISTS #10789, CC# 1853
SKCC #22, C#38
NAQCC #306
QRPARCI #12163

In a message dated 02/15/07 08:19:00 Mountain Standard Time, ksaves2@... writes:
Why he doesn't
do a bigger run escapes me but I suspect he might have been stuck
with leftover kits in the past

981. Re: [AT_Sprint] Re: WTB: ATS-3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-15 15:32:00 UTC
From: Gil Stacy
Topic: 958 Message: 981
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

982. Re: [AT_Sprint] Re: WTB: ATS-3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-15 15:44:12 UTC
From: Mark Langenfeld
Topic: 958 Message: 982

Yep; snooze/lose. That's what caught me.

I'm just hopeful someone has a '3A that is surplus to their current needs that I could put it to good use at home and in the field. Maybe not, but I figure I can't hit if I don't swing.

Mark -- WA9ETW

>
> Kurt,
> If I'm not mistaken, Steve has done repeat runs of both the ATS3 and 3a. If one misses the first run, one has to regularly check his site or monitor this list and QRP-L closely for the announcement of the second run which is usually smaller than the first run. He who hesitates...
>
> 73 Gil NN4CW
>
>
>
>

--
CoreComm Webmail.
http://home.core.com

983. Re: [AT_Sprint] Re: WTB: ATS-3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-15 16:03:08 UTC
From: John A. Evans - N0HJ
Topic: 958 Message: 983

It wasn't always like this. In the old days, Steve would do one run of whatever it was he designed and that was it. Of course, over time, the popularity of his rigs has skyrocketed until it has reached what we see now with the popular ATS-3 series of rigs. He certainly is a great asset to the QRP community.

72 - john - n0hj

984. Re: [AT_Sprint] Re: WTB: ATS-3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-15 17:09:41 UTC
From: Kurt
Topic: 958 Message: 984

Sort of like the Linux Torvalds of Linux fame.:-)

In that regard he might be a bit more comfortable in expanding
the numbers of kits he orders. I suspect he is constrained by
price/quantity ranges by his board suppliers. Parts are probably
not that difficult. One of the major issues of the equation is
putting the kits/documentation together for shipping. I see alot of
labor there.

Kurt Savegnago

John A. Evans - N0HJ wrote:
> It wasn't always like this. In the old days, Steve would do one run of
> whatever it was he designed and that was it. Of course, over time, the
> popularity of his rigs has skyrocketed until it has reached what we see
> now with the popular ATS-3 series of rigs. He certainly is a great
> asset to the QRP community.
>
> 72 - john - n0hj
>
>
>
>
> Yahoo! Groups Links

985. Re: ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-15 18:10:16 UTC
From: jgaffke
Topic: 905 Message: 985

Hi Mike,

We need at least one pin for rx audio into that A2D for
standalone PSK31 operation, and the 20 pin MSP430F1121A
already has a full boat.

Could buy some of those 20 pins back with hardware hacks,
but then old firmware no longer works. And even if you did
come up with 3 or 4 pins, I can see plenty of reasons we might
want even more pins later for stuff like an SPI A2D for better
dynamic range, SPI flash for message memory (incoming and outgoing),
DC ref for the rx audio A2D (else maintain running average in
firmware?), dedicated UART port for optional laptop control when
operating CW, SWR monitor, Vojtech's battery monitor ...

Each of these mods is fairly trivial, maybe one dead bug'ed SOIC8.
Once you remove the old MSP430F1121A, it is almost as easy to
replace it with a 28 pin part as it is a 20 pin part. Pins 1-10
map exactly and old pins 11-20 map to 19-28 on the new part.
Just lift those new 8 pins up a bit, or put tape under them.
Same firmware. TI actually thought ahead on that one.

>You might be able to use the msp430f1132. The only thing you loose
>over the msp430f1232 is the extra gpio pins. Flash and ram and 10-bit
>sar are the same, plus the pin out is a one for one direct
>replacement for the current msp430f1121a.
> -mike/w1mt

####################
>...please consider adding battery monitor.
>73, Vojtech OK1IAK

The A2D on the MSP430F1232 supports multiple channels. So could
occasionally (perhaps at end of each dot, dash, or psk31 tx run,
and when that menu item is selected to get the rx current) check a
pin for Vbat. Mod required involves two scaling resistors and a wire.
Maintain a record of max and min seen over the last minute or so.
Report those max and mins via Morse when a menu item is selected.

Jerry Gaffke, KE7ER

986. Re: [AT_Sprint] Re: ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-15 18:26:43 UTC
From: Michael Harnage
Topic: 905 Message: 986

Two of the existing gpio ports are only used during
boot to check for the presence of the filter board.
Perhaps one (or both) could be dual used? Maybe not,
hmmmm. Anyway, you are correct in that the current
mpu is full, port wise.

-mike/w1mt

--- jgaffke <jgaffke@...> wrote:

> Hi Mike,
>
> We need at least one pin for rx audio into that A2D
> for
> standalone PSK31 operation, and the 20 pin
> MSP430F1121A
> already has a full boat.
>

_____
Any questions? Get answers on any topic at www.Answers.yahoo.com. Try it now.

987. Re: ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-15 19:24:07 UTC
From: jgaffke
Topic: 905 Message: 987

Hi Mike,

I've thought of cutting the ground straps on the filter modules,
replacing them with 10K's so we can use them for other stuff
after power up.

Or going down to one band-select wire with a different resistor
on each filter module, measuring the voltage with that new A2D.
(bonus: a spare pin into the band modueles)

Or scan the four button wires somehow using SCLK and SDATA
(with FSYNC false so the DDS is not disturbed),
then only one input pin is required for the four buttons.

The hardest thing about the 28 pin part is getting the 20 pin part
off without destroying pads. Not worried about my board, I bent
those pins down before I first installed it, so it will be easy
to pick them up one at a time. Bought my MSP430F1232 at the same
time I sent Steve the check for an ATS3A last June. This project
has been on the back burner for a long time.

I think the best thing for most others to do would be to park the
new MSP430F1232 right on the back of the MSP430F1121A. All 20 pins
are common except RESET, which gets grounded on the old chip.
Also the two XTAL pins, lifted on the new part so we can park a
100KHz crystal there, cuz we'll need an interrupt that is 4KHz
dead on. Easily reversible. No pads ripped up.
I'll try that first, see if the old MSP4301232 interferes in any way.

Jerry

--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:
>
> Two of the existing gpio ports are only used during
> boot to check for the presence of the filter board.
> Perhaps one (or both) could be dual used? Maybe not,
> hmmmm. Anyway, you are correct in that the current
> mpu is full, port wise.
>
> -mike/w1mt
>
> --- jgaffke <jgaffke@...> wrote:
>
> > Hi Mike,
> >
> > We need at least one pin for rx audio into that A2D
> > for

> > standalone PSK31 operation, and the 20 pin
> > MSP430F1121A
> > already has a full boat.
> >

988. Re: Hi all

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-15 20:24:20 UTC
From: dombaines
Topic: 902 Message: 988

Thanks.

I have not been able to get an internet conection up and running for
a few days. I will dertainly take a look the options of the filters
you suggest as I am aware of the broadcast station problems on 40m in
EU having run a rockmite on 40m.

73

Dom
M1KTA (HB9/M1KTA, in Zurich)
--- In AT_Sprint@yahoogroups.com, Lutz Bergner <l.bergner@...> wrote:
>
> Hi Dom,
>
> Let me answer between the lines....
> Am Mittwoch, den 07.02.2007, 06:02 +0000 schrieb Dominic Baines:
> >
> > 1. Should I modify it or build it vanilla?
> As you live in europe like me ,I'd say modify it to have full
extent of
> fun. 40m evening on most and 30m on some days can be real hell with
the
> original version.
> Build up the mainboard and one Band vanilla first just to see it
works.
> As you will use it in europe I 'd recommend you to build in a
Mosfet-
> T/R switch and use (e.g.) my narrow 2 section rx_filters. If you
chose
> to do so you have to build up all bandmodules modified as the former
> BK_diodes_pin gets now the input of the rx filter coming from the
T/R
> switch.
> > 2. Can the ATS-3 be made as an ATS-3a?
> Yes, you can give it all properties of the ATS-3a without loosing
the
> wideband reception. It is not too difficult. You 'd have to do the
> following mods:
> > 3. What are the differences?
> >
> 1. The major one. Build in a T/R switch from 2 2N7002 ugly style.
see
> photo and schematic in my gallery here in this group (DL2HRP) NO
more BC
> distortion...

>
> 2. Improve the match and termination of the IF crystal filter. Two
ways
> to do it. See Michaels W1MT homepage for the narrow band variant (L
> section) built as "Teepee"
> Harry OE6GC did it with small transformers. However the result is a
> flatter response with less insertion loss that sounds simply great.
>
> 3. Incorporate one of the spare BAV90 diodes across U3a 's feedback
to
> have a limiting and avoiding audio distortion in situations with
real
> strong signals around.
>
> 4.Rather small corrections to audio response to further improve it.
> Either you take values from ATS3a schem or look at W1MTs homepage
again.
> OE6GC has an interestig variant of that mod too.
>
> -------------------
> I did them all except Point 4. (planned soon) and will never sell
that
> rig. I am afraid , it already became some kind of obsession to me :-
).
> What do you want more - a great receiver -even here in europe,
smooth
> full BK , RIT, XIT, builtin Keyer, vy low power consumtion at a
size of
> a credit card....
>
>
> 72s
>
> Lutz, DL2HRP
>
>
>
>
>
> >
> >
> >
> --
> iXadmin
>
> ---------------------------
> * Systemadministration
> * Netzwerkberatung
> * Internetdienstleistungen
> ---------------------------

>
> Tel.: 034922 66717
> Fax.: 034922 66718
> mobil: 0175 2631032
> VOIP(sipgate): 01801 6666260511
> Mail: l.bergner@...
>

989. Re: [AT_Sprint] Re: WTB: ATS-3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-15 21:50:17 UTC
From: Steven Weber
Topic: 958 Message: 989

> Why he doesn't do a bigger run escapes me

Mostly, its got to do with keeping this a hobby.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

990. Re: [AT_Sprint] Re: WTB: ATS-3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-15 21:56:07 UTC
From: Mark Langenfeld
Topic: 958 Message: 990

The very best reason of all.

72,

Mark -- WA9ETW (who still would very much like to find one of these rigs)

>
> > Why he doesn't do a bigger run escapes me
>
> Mostly, its got to do with keeping this a hobby.
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://www.qsl.net/kd1jv/
> http://kd1jv.qrpradio.com
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
--
CoreComm Webmail.
http://home.core.com

991. Re: [AT_Sprint] Re: WTB: ATS-3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-15 21:59:44 UTC
From: Jeffrey Embry
Topic: 958 Message: 991

The most sane reason I ever heard.

Hobby's are meant to enjoy...not make money from...then it is a business.

72,

--
Jeff Embry, K3OQ
FM19je
ARCI #11643, FPQRP #-696,
QRP-L # 67, NAQCC #25
AMSAT LM-2263

No trees were harmed in the sending of this message, however a large
number of electrons were terribly inconvenienced.

On 2/15/07, Steven Weber <kd1jv@...> wrote:
> > Why he doesn't do a bigger run escapes me
>
> Mostly, its got to do with keeping this a hobby.
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://www.qsl.net/kd1jv/
> http://kd1jv.qrpradio.com
>
>
>
> Yahoo! Groups Links
>
>
>
>

992. Re: [AT_Sprint] Re: WTB: ATS-3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-15 22:38:11 UTC
From: john
Topic: 958 Message: 992

At 04:50 PM 2/15/2007, Steven Weber wrote:
> > Why he doesn't do a bigger run escapes me
>
>Mostly, its got to do with keeping this a hobby.

The perfect answer!

John K5MO

993. Re: [AT_Sprint] Re: WTB: ATS-3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-16 00:34:49 UTC
From: ron
Topic: 958 Message: 993

somebody's got to fix them TV's in the store.

Ron, wb1hga

Steven Weber wrote:
> > Why he doesn't do a bigger run escapes me
>
> Mostly, its got to do with keeping this a hobby.

994. Re: [AT_Sprint] ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-16 15:20:22 UTC
From: Steven Weber
Topic: 905 Message: 994

If I were to use the MSP430F1221 chip with 8 ch A/D in the "3B" version of the ATS, I could have as many as 5 unused ports available. It also doubles the memory.

Switches would now use one A/D channel and switched resistor divider. Mute would double as band select inputs, by using R dividers on the band modules. After the band module votage is read, the port would be reconfigured as an output to drive the mute switch.

2 of the unused ports could be used for serial com and a 3d for audio A/D input, leaving an extra 2 ports uncommited.

I might also put an op amp in the Tx keying ciruit to make a linear keying ramp voltage.

I imagine these changes would help alot with trying to make it do PSK?
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

995. Re: ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-17 06:30:14 UTC
From: jgaffke
Topic: 905 Message: 995

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
>If I were to use the MSP430F1221 chip with 8 ch A/D in the "3B"
version of
>the ATS, I could have as many as 5 unused ports available. It also
doubles
>the memory.

"3B"? That's a happy thought!
I don't see an MSP430F1221, I'll assume the MSP430F1132. 256 RAM, 8KB
flash.

>Switches would now use one A/D channel and switched resistor divider.
>Mute would double as band select inputs, by using R dividers on the band
>modules. After the band module votage is read, the port would be
>reconfigured as an output to drive the mute switch.

Using the A/D on the band select input, plus mute, seems good.
Only gets read once at reset.

Using the A/D on the switches would work, but could get in the way on
a design that is constantly being tinkered with by many people.
Can't just interrupt on a key press, the A/D has to be actively watching.
A little bit ugly having to read multiple times to avoid catching
transitions.
These are not killer objections.

>2 of the unused ports could be used for serial com and a 3d for audio A/D
>input, leaving an extra 2 ports uncommited.
>
>
>I might also put an op amp in the Tx keying ciruit to make a linear
keying
>ramp voltage.
>
>I imagine these changes would help alot with trying to make it do PSK?

An A2D would definitely help. ;)
And I suspect a linear ramp would work great.
UART is nice, would there be a separate connector to the outside?
That switcher thing would be fun to play with, but perhaps best left off
when hundreds of kit builders are debugging these with their bare hands.
Think about the DC reference into that A/D. Any error there will
throw off the algorithm. Would be nice to avoid computing it with
firmware. So we may want another pin for DC offset.
Does AGC action jerk the DC offset around, even a little bit?

It's really frustrating to look at the newer MSP430F2*** family.
They run twice as fast, and have lower power for comparable performance.
Have a UART bootstrap loader in ROM that removes the need for JTAG
http://focus.ti.com/lit/an/slaa089d/slaa089d.pdf
The power-on-reset is now done right, using a comparator with hysterisis.
Added pullups on the GPIO's, may do away with the RPAK.
I would like an SOIC-28 part with 16 bit A/D, they don't have anything
near.
The nice 16 bit A/D's are in 14 pin parts, next stop if you want an
A/D is
a 10 bit SAR in a TSSOP-38.

Given the freed up JTAG pins, 14 pins almost does it. But you're
down to 128 bytes of RAM. Gaaaa!

I'd look hard at the MSP430F2232-TSSOP38. Their 1K pricing shows a 7%
price
jump over the MSP430F1132. 512 RAM, 8K of flash. Those with big bucks
and dreams of running CPM again can opt for the pin compatable
MSP430F2274, 1K RAM + 32K flash, Digikey sells it.

Pads are free. Primary cost might be the postage for all those cold
solder
joints getting shipped back to Steve. Pins on that TSSOP38 are same
dimensions as the DDS chip, just a few more of them. And they don't
all have to be soldered down. It's as long as the current SOIC20, not
quite
as wide. Is that DDS part especially troublesome, or are soldering
problems
spread across a wide variety of parts? Perhaps someone could provide an
optional service of mounting troublesome parts.

Maybe what was the JTAG and RPAK could become a daughterboard connector
for specials.

I don't know yet how usable a 10 bit A/D will be in the real world.
Maybe a daughterboard could be used for an SPI A/D by those with
more than a casual interest in PSK31.

Don't assume I know what I'm doing here. Most of my operating was 40
meter
CW some 30 years ago. And not much of it then. Have yet to even
watch someone operate PSK31. But it's a very interesting puzzle.

That said, the example program I posted has a 500 Hz PSK signal plus a
QRM
component at twice the amplitude (4x the power). With the C constant
"scale"
at the default of 1.0, the samples run from +511 to -511. If the
samples are
clipped to 511,-511 (not done in the program posted), it continues
working
to a "scale" of 3.3. And to a minimum "scale" of 0.0022. Thats a

voltage ratio of minimum usable signal to maximum usable signal of 1500,
which left me dumbfounded. When "scale" is set to 0.0022, the samples
coming out of the simulated 10 bit A/D are all 1, 0, and -1.
And at 3.3, the vast majority of samples peg the A/D.
Did I mention that all this includes a QRM component at 4x the power?

The MSP430 A/D allows us to adjust the gain, and thus give us
additonal AGC
if we want it. But all that AGC could well get us into hot water.

What dynamic range must the signal into the uC handle to be useful
for weak and strong signals comparable to what folks expect from their
soundcard implementations, given the ATS3A's analog AGC?

####################
>>...please consider adding battery monitor.
>>73, Vojtech OK1IAK
To which I responded with:
>The A2D on the MSP430F1232 supports multiple channels. So could
>occasionally (perhaps at end of each dot, dash, or psk31 tx run, ...

Like the switch sensor using the A/D, this adds stuff that is always
going on.
Simpler to add another menu entry that works like straight key mode.
Dot keys the transmitter as if it were a straight key. Dash does nothing
to the transmitter. But on the completion of either, the rig reports
the battery
voltage via Morse.

Jerry Gaffke, KE7ER

996. Re: ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-17 07:40:27 UTC
From: jgaffke
Topic: 905 Message: 996

I figured I had better double check that ratio of 1500 regarding
max vs min signal amplitudes claimed in my prevous post.

>it continues working to a "scale" of 3.3. And to a minimum
>"scale" of 0.0022. Thats a voltage ratio of minimum usable
>signal to maximum usable signal of 1500

Turns out I was not quite correct. In a curious way.

When you turn off the QRM without changing the amplitude of the
500 Hz signal, it stops working at scales below 0.0062 (not 0.0022)

The signal has to ride on top of the QRM in order to be detected
by that LSB of the A2D. The off frequency QRM somehow averages out
to zero, even though we have some very non linear sampling going
on here.

So perhaps a more honest figure would be more like 3.3/0.0062.
Of course, if we insist on measuring our dynamic range without
the QRM component present, it's going to work fine way above 3.3.

Without QRM, we start seeing all zeros at scales of 0.0058
and below. The range of 0.0058 to 0.0062 corresponds to a
region where we can catch it when sampled at 90 degrees, but not
at 67.5 degrees. This is that 7.6% penalty mentioned in the
notes toward the bottom of pskuc.c

Jerry Gaffke, KE7ER

997. Cash's solder paste and hot air smd method

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-17 20:21:07 UTC
From: nn4cw
Topic: 997 Message: 997

I received my syringes from Cash loaded with solder paste Friday. I had three projects on my agenda: KD1JV's digital dial, the ATS docking station, and a 3a kit. This morning I completed my digital dial. I ordered the larger needles per Cash's recommendation.
I was unable to find the beverage warmer, and no longer had a coffee maker with a warmer. I considered using an oil candle heater, but it would only heat to 170 F. Cash recommends a target heat of 210 F, but he says cooler will do. I decided to try an old 10.5" black cast iron skillet because of its favorable thermal mass. I have a digital cooking thermometer which reads out instantly. Having a gas range, I am able control the heat better than with an electric stove-top. With experimentation, I was able to determine how long (not long) it took to heat it to 210 F, and timed the rate of cooling, which was acceptable. The thermometer's digital read-out is on a swivel and I laid the thermometer in the pan, and supported the plastic head above the pan's surface. It remained in place during the hot air flow. I would not recommend this stove top method with a cast iron frying pan without a digital thermometer.

The learning curve for parts placement and paste application was fairly rapid for the resistors and capacitors. Cash's website is most helpful. The IC's were a little more difficult and I had to wipe the paste clean off the IC pads once and carefully remove paste from the back of the smallest IC. Having completed a digital dial a couple of weeks ago using a doofus and soldering iron, I had a benchmark to compare methods. Even with a learning curve, the parts placement was considerably quicker and less boring than one at time with the soldering iron. It took less than an hour and a quarter to populate the board, including several placement screw-ups and several paste reapplications.

I heated the pan to 215 F. I lowered the board in the pan and monitored the thermometer, when the temperature hit 205, I turned the heat on for a few seconds and the temperature went to 210 F. The paste began to flow and I applied the hot air. The paste silvered in a matter of minutes. The IC's had 4-5 bridges per IC, a resistor and cap were blown out of position. Before using solder wick on solder bridges on IC's, I've found that it is sometimes easier to lightly place my Hakko's iron's chisel point between the leads and drag the blob to the pads. It clears the bridge for me more than half the time, unless the bridge is large which then requires solder wick.
I spent a few minutes touching up with my iron and re-flowed a few pads where the solder looked a little dull. I completed the back of the board with my iron. The dial fired up without a hitch.

Each syringe is loaded with .5 ml of paste. It looks like a pitiful amount until application begins. The job required only .1 ml. I believe one syringe will easily do the job for an ATS3, but buy two just in case. You won't find this stuff at Ratshak. I've gotten fairly fast with the iron and doofus method, having built several smd projects with the most complex being a Micro908 antenna analyzer, an ATS2 and two ATS3's, but this hot air method is considerably quicker and the results look neater. It's the real deal. YMMV.
73, Gil NN4CW

998. February RFTB

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-17 21:48:29 UTC
From: Larry Makoski
Topic: 998 Message: 998

This Sunday evening, the Flying Pigs Amateur Radio Club International will be holding its monthly Run For The Bacon. This is a friendly, two hour QRP CW Sprint, which is open to ALL radio amateurs, will last from 9:00 - 11:00PM EST (0200-0400 UTC Monday). So, if you're not exhausted after working DX all weekend, remember the RFTB !!!

You may work stations once per band on 160, 80, 40, 20, 15 or 10 Meters. Suggested starting frequencies are 1.812, 3.562, 7.044, 14.062, 21.062, and 28.062 MHz.

The exchange is RST, S/P/C (State, Province, Country) and Flying Pigs membership number. If you're not a member of the Flying Pigs, and would like to be; then please click on the "membership" hyperlink on .http://www.gentzow.com/fpqrp/ Otherwise, non-members can just use their output power figure.

You can report your score via the Autolog page which can be found at :
http://gentzow.com/fpqrp/autolog.asp
or you can mail your logs to the address given on the Autolog page. The deadline for logs is February 25th at 2400 UTC.

Hope to catch you on the air Sunday evening!

72 es "oo"
Larry W2LJ FP#612

--
73 de Larry W2LJ
QRP - When you care to use the very least!

http://www.w2lj.qrpradio.com
http://w2lj.blogspot.com/

999. Run for the Bacon, 2/18/2007, 6:00 pm

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-19 01:42:32 UTC
From: AT_Sprint@yahoogroups.com
Topic: 999 Message: 999

Reminder from: AT_Sprint Yahoo! Group
http://groups.yahoo.com/group/AT_Sprint/cal

Run for the Bacon
Sunday February 18, 2007
6:00 pm - 8:00 pm
(This event repeats every month on the third Sunday.)
Location: Your shack or anywhere

Notes:
This Sunday evening, the Flying Pigs Amateur Radio Club International will be holding its monthly Run For The Bacon. This is a friendly, two hour QRP CW Sprint, which is open to ALL radio amateurs, will last from 9:00 - 11:00PM EDT (0200-0400 UTC Monday).

You may work stations once per band on 160, 80, 40, 20, 15 or 10 Meters. Suggested starting frequencies are 1.812, 3.562, 7.044, 14.062, 21.062, and 28.062 MHz.

The exchange is RST, S/P/C (State, Province, Country) and Flying Pigs membership number. If you're not a member of the Flying Pigs, and would like to be; then please cli

All Rights Reserved
Copyright ? 2007
Yahoo! Inc.
http://www.yahoo.com

Privacy Policy:
http://privacy.yahoo.com/privacy/us

Terms of Service:
http://docs.yahoo.com/info/terms/

1000. Re: [AT_Sprint] Re: ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-20 09:45:56 UTC
From: Vojtěch Bubník
Topic: 905 Message: 1000

Hi Jerry.

> I created folder KE7ER in the files section, moved pskuc.c
> into the folder as there may be related material accumulating.

I looked at the source. It takes some time to get used to thinking in signals. The analysis follows of what your PSK31 decoder does IMHO. I think Patrick Lindecker - author of MultiPSK may give more precise description, he is my personal guru, hi.

1) The signal is frequency shifted to the baseband by multiplying it by a sinus running at 500Hz.

2) Every second resulting sample is thrown away, which results in 2ksamples/sec stream. If the signal has not been bandlimited to 1kHz before (either by the crystal ladder filter or by AF filtering), there will be a strong alias of signals around 1.5kHz and 2.5kHz. I wonder what the rejection of ATS-3A at 1.5kHz will be. IMHO the rejection of the crystal ladder filter is somewhere around 50dB.

3) The signal is low pass filtered by a FIR filter with a rectangle impulse response.
http://mathworld.wolfram.com/RectangleFunction.html
This corresponds to a filter with a frequency response of a sinc function
http://en.wikipedia.org/wiki/Image:Sinc_function_%28both%29.svg
The first sidelobe of the lowpass filter is -14dB at cca +-47Hz from 500kHz carrier, at -18 at +-78Hz, -20dB at +-109Hz, -26dB at +-300Hz etc.

The algorithm certainly works, it is just not ideal. A simulation on white noise, ionospheric simulator and on the air is needed.

From your source code comments:
> Next steps:
> Add a mode to the ATS3A firmware for tuning up/down in one Hz increments.
> Run the decoder algorithm on a desktop, listening to soundcard audio from the
> ATS3A.

I would be happy if you could replace PSK31 decoder in some software and compare it with other decoders by decoding signal fed through a ionospheric simulator or at least additional gausian white noise. I think you prefere linux, there is a lot of PSK31 software with source code, that may be modified.

I received the ATS-3A from Ron Pfeiffer N1ZSW today. I hope to build the parallel programmer and start tinkering with the firmware this weekend. The first test would be probably to send a precanned PSK31 message at a fixed frequency, so that other owners of ATS2 and ATS3 may try that and judge the PSK31 signal quality of a PSK31 envelope created by CW keying.

73, Vojtech OK1IAK

1001. WTB (still): ATS-3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-20 15:15:38 UTC
From: mlangenf
Topic: 1001 Message: 1001

Still in search of a nicely built and problem-free ATS-3A (will also consider a complete, unbuilt kit). Can someone on the list please help me locate one of these rigs?

Tnx es 72/73,

Mark -- WA9ETW

1002. Re: ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-22 04:51:04 UTC
From: jgaffke
Topic: 905 Message: 1002

Hi Vojtich,

--- In AT_Sprint@yahoogroups.com, Vojtìch Bubník <bubnikv@...> wrote:
>I think Patrick Lindecker - author of MultiPSK may give more precise
description

Please send a copy of the file to Patrick if you think he might
be interested in it.

> 1) The signal is frequency shifted to the baseband by multiplying it
by a sinus running at 500Hz.

So "baseband" in this case is the 31.25 baud stream of ones and zeros.

>If the signal has not been bandlimited to 1kHz before (either by
the crystal ladder filter or by AF filtering), there will be a
>strong alias of signals around 1.5kHz and 2.5kHz.

The crystal filter will reject this 1500 Hz about as well as the
RF image at -500 Hz. I don't have much trouble with that -500 Hz
RF image on CW, and the audio filter isn't helping like it would with
the 1500 Hz alias.

> 3) The signal is low pass filtered by a FIR filter with a
> rectangle impulse response. ... The first sidelobe of the
>lowpass filter is -14dB at cca +-47Hz from 500kHz carrier, at -18
>at +-78Hz, -20dB at +-109Hz, -26dB at +-300Hz etc.

Program pskuc.c shows errors pretty much taking over when the
QRM is ~8x the amplitude, or 18dB. That agrees well with your
analysis. How much stronger can a signal 100 Hz away be
before the other popular PSK31 decoders start to fail?

>I would be happy if you could replace PSK31 decoder in some
>software and compare it with other decoders

I would too. But I'll be lucky if I find the time to just get mine
going on audio into the soundcard as previously outlined.

>I hope to build the parallel programmer ....

I have the Olimex cable as described here:
http://www.sparkfun.com/datasheets/MSP/msp430-jtag-d.pdf
A very good deal at around 15 US$. If you are building your own,
all the stuff around U1, U3 and T1 could probably be done away with,
just make sure the outgoing buffer has a Vcc that matches the 3.3v
of the MSP430. If I ever get around to using it, will post my
notes on exactly what is needed of the circuitry they include

and how to hook it up.

73's,
Jerry Gaffke, KE7ER

1003. Re: ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-22 14:12:05 UTC
From: chris reeves
Topic: 905 Message: 1003

If there is going to be a "3B", and it is going to be full featured. How about a biult in tuner. or even an external tuner. i have been wanting to build an electronicly controled tunner but i have no experiance in programing pics and things like that. i just built a tuner from the arrl handbook on a qrp scall. it is the one that uses a pi type low pass configuration. it is for balanced antenna to unbalanced 50 ohm. the balun is on the rig side and this works very well. the loss is only .2 watts!

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
>
> If I were to use the MSP430F1221 chip with 8 ch A/D in the "3B" version of
> the ATS, I could have as many as 5 unused ports available. It also doubles
> the memory.
>
> Switches would now use one A/D channel and switched resistor divider.
> Mute would double as band select inputs, by using R dividers on the band
> modules. After the band module votage is read, the port would be
> reconfigured as an output to drive the mute switch.
>
> 2 of the unused ports could be used for serial com and a 3d for audio A/D
> input, leaving an extra 2 ports uncommited.
>
> I might also put an op amp in the Tx keying ciruit to make a linear keying
> ramp voltage.
>
> I imagine these changes would help alot with trying to make it do PSK?
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://www.qsl.net/kd1jv/
> http://kd1jv.qrpradio.com
>

1004. Re: [AT_Sprint] Re: ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-22 14:40:18 UTC
From: Petr Ourednik
Topic: 905 Message: 1004

Hi,

yes, that is what missing to me in AST-3A only. The pb is that if tunner will be incl. that has to be completed with SWR meter fully controlled by PIC inside of ATS. If ATS-3B will have all the features as mentioned inlc. some built-in tuner (something like K1 or so) this tcvr will be the best in the world for me !!! ...as not needed anything more just batt., antenna all in size of t-shirt.

73, Petr OK1RP

On Thu, 22 Feb 2007 14:12:05 -0000, "chris reeves" <kr4ez@...> said:
> If there is going to be a "3B", and it is going to be full featured.
> How about a biult in tuner. or even an external tuner. i have been
> wanting to build an electronicly controled tunner but i have no
> experiance in programing pics and things like that. i just built a
> tuner from the arrl handbook on a qrp scall. it is the one that uses
> a pi type low pass configuration. it is for balanced antenna to
> unbalanced 50 ohm. the balun is on the rig side and this works very
> well. the loss is only .2 watts!
>
>
> --- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
> >
> > If I were to use the MSP430F1221 chip with 8 ch A/D in the "3B"
> version of
> > the ATS, I could have as many as 5 unused ports available. It also
> doubles
> > the memory.
> >
> > Switches would now use one A/D channel and switched resistor
> divider.
> > Mute would double as band select inputs, by using R dividers on
> the band
> > modules. After the band module votage is read, the port would be
> > reconfigured as an output to drive the mute switch.
> >
> > 2 of the unused ports could be used for serial com and a 3d for
> audio A/D
> > input, leaving an extra 2 ports uncommited.
> >
> > I might also put an op amp in the Tx keying ciruit to make a
> linear keying
> > ramp voltage.
> >
> > I imagine these changes would help alot with trying to make it do

> PSK?
> > 72,
> > Steve, KD1JV
> > "Melt Solder"
> > White Mountains of New Hampshire
> > http://www.qsl.net/kd1jv/
> > http://kd1jv.qrpradio.com
> >
>
>
--
Petr Ourednik
indians@...
--
http://ok1rp.blog.cz (Hamradio)
http://topband.blog.cz (160m)
http://www.qsl.net/ok1rp

1005. Re: WTB (still): ATS-3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-22 16:31:15 UTC
From: mlangenf
Topic: 1001 Message: 1005

Sorry for the incessant drumbeat, but it appears I am going to have to
be persistent in order to find one of these radios. (See below.)

Please respond off list if you can help.

Tnx,

Mark -- WA9ETW
mlangen@...

--- In AT_Sprint@yahoogroups.com, "mlangenf" <mlangen@...> wrote:
>
> Still in search of a nicely built and problem-free ATS-3A (will also
> consider a complete, unbuilt kit). Can someone on the list please
> help me locate one of these rigs?
>
> Tnx es 72/73,
>
> Mark -- WA9ETW
>

1006. Re: [AT_Sprint] Re: WTB (still): ATS-3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-22 16:41:29 UTC
From: Kurt
Topic: 1001 Message: 1006

Hi Mark,

Periodically post but monitor Steve's site for when he gets something new. I bet the next rendition will be great. I have to wait over 6 months for the 3A to come out.

Kurt

mlangenf wrote:
> Sorry for the incessant drumbeat, but it appears I am going to have to
> be persistent in order to find one of these radios. (See below.)
>
> Please respond off list if you can help.
>
> Tnx,
>
> Mark -- WA9ETW
> mlangen@...
>
>
> --- In AT_Sprint@yahoogroups.com, "mlangenf" <mlangen@...> wrote:
>
>>Still in search of a nicely built and problem-free ATS-3A (will also
>>consider a complete, unbuilt kit). Can someone on the list please
>>help me locate one of these rigs?
>>
>>Tnx es 72/73,
>>
>>Mark -- WA9ETW
>>

1007. Re: [AT_Sprint] Re: WTB (still): ATS-3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-22 17:20:26 UTC
From: Mark Langenfeld
Topic: 1001 Message: 1007

Thanks, Kurt. I do watch Steve's website, but I also have specific reasons for wanting a '3A. I remain hopeful I'll be able to find one. (Just missed TWO of them offered on QRP-L a couple days ago due to a regretable comedy of errors on my part. Very disappointing!)

Cheers,

Mark -- WA9ETW

>
> Hi Mark,
>
> Periodically post but monitor Steve's site for when he gets something
> new. I bet the next rendition will be great. I have to wait over 6
> months for the 3A to come out.
>
> Kurt
>
> mlangenf wrote:
> > Sorry for the incessant drumbeat, but it appears I am going to have to
> > be persistent in order to find one of these radios. (See below.)
> >
> > Please respond off list if you can help.
> >
> > Tnx,
> >
> > Mark -- WA9ETW
> > mlangen@...
> >
> >
> > --- In AT_Sprint@yahoogroups.com, "mlangenf" <mlangen@...> wrote:
> >
> >>Still in search of a nicely built and problem-free ATS-3A (will also
> >>consider a complete, unbuilt kit). Can someone on the list please
> >>help me locate one of these rigs?
> >>
> >>Tnx es 72/73,
> >>
> >>Mark -- WA9ETW
> >>
>
>
>
>
>
>
>

>
>
>
>
>
>
>
>
--
CoreComm Webmail.
http://home.core.com

1008. Re: [AT_Sprint] Re: ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-22 16:38:45 UTC
From: Steven Weber
Topic: 905 Message: 1008

>> If there is going to be a "3B", and it is going to be full featured.
>> How about a biult in tuner. or even an external tuner. i have been

There will be NO built in tuner. There are a number of resons for this.

1. What type of tuner you use depends on what type of antenna your using.

If your using a classic dipole, you don't need a tuner. Portable verticals
may or may not need a tuner.

End feed antennas need radically different values in the tuner depending on
if its near 1/2 wave long or is much shorter than 1/2 wave.

Balanced line feed antennas need thier own unique type of tuner.

We can't make one type of tuner which will cover all types of antennas, so
I feel its best to let the individual user decide which, if any, type of
tuner best serves thier needs.

2. The Elecraft T1 tuner is about as small as an auto tuner can get. I
can't make one any smaller or less expensively.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

1009. Re: ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-22 18:44:40 UTC
From: chris reeves
Topic: 905 Message: 1009

i just looked at the Elecraft T1 tuner. Are those miniture relays in the unit? I would think transistors would work better and be less expensive?

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
>
> >> If there is going to be a "3B", and it is going to be full featured.
> >> How about a biult in tuner. or even an external tuner. i have been
>
> There will be NO built in tuner. There are a number of resons for this.
>
> 1. What type of tuner you use depends on what type of antenna your using.
>
> If your using a classic dipole, you don't need a tuner. Portable verticals
> may or may not need a tuner.
>
> End feed antennas need radically different values in the tuner depending on
> if its near 1/2 wave long or is much shorter than 1/2 wave.
>
> Balanced line feed antennas need thier own unique type of tuner.
>
> We can't make one type of tuner which will cover all types of antennas, so
> I feel its best to let the individual user decide which, if any, type of
> tuner best serves thier needs.
>
> 2. The Elecraft T1 tuner is about as small as an auto tuner can get. I
> can't make one any smaller or less expensively.
>
>
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://www.qsl.net/kd1jv/
> http://kd1jv.qrpradio.com
>

1010. Re: [AT_Sprint] Re: ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-22 19:18:46 UTC
From: Joe Rocci
Topic: 905 Message: 1010

Chris,
They're latching relays, so they only draw current for an instant when they switch.

Transistors and pin diodes aren't up to the job, as the RF currents and RF voltages in the circuit can become quite high depending on the load and how the tuner is set.

Latching relays really are the best choice, but they're expensive.

Joe

----- Original Message -----
From: chris reeves
To: AT_Sprint@yahoogroups.com
Sent: Thursday, February 22, 2007 1:44 PM
Subject: [AT_Sprint] Re: ATS3 and portable digital modes

i just looked at the Elecraft T1 tuner. Are those miniture relays in the unit? I would think transistors would work better and be less expensive?

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
>
> >> If there is going to be a "3B", and it is going to be full featured.
> >> How about a biult in tuner. or even an external tuner. i have been
>
> There will be NO built in tuner. There are a number of resons for this.
>
> 1. What type of tuner you use depends on what type of antenna your using.
>
> If your using a classic dipole, you don't need a tuner. Portable verticals
> may or may not need a tuner.
>
> End feed antennas need radically different values in the tuner depending on
> if its near 1/2 wave long or is much shorter than 1/2 wave.
>
> Balanced line feed antennas need thier own unique type of tuner.
>
> We can't make one type of tuner which will cover all types of antennas, so
> I feel its best to let the individual user decide which, if any,

type of
> tuner best serves thier needs.
>
> 2. The Elecraft T1 tuner is about as small as an auto tuner can
get. I
> can't make one any smaller or less expensively.
>
>
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://www.qsl.net/kd1jv/
> http://kd1jv.qrpradio.com
>

1011. Re: ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-23 00:28:02 UTC
From: radio_kx0r
Topic: 905 Message: 1011

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
>
> >> If there is going to be a "3B", and it is going to be full
featured.
> >> How about a biult in tuner. or even an external tuner. i have
been
>
> There will be NO built in tuner. There are a number of resons for
this.
>
> 1. What type of tuner you use depends on what type of antenna your
using.
>
> If your using a classic dipole, you don't need a tuner. Portable
verticals
> may or may not need a tuner.
>
> End feed antennas need radically different values in the tuner
depending on
> if its near 1/2 wave long or is much shorter than 1/2 wave.
>
> Balanced line feed antennas need thier own unique type of tuner.
>
> We can't make one type of tuner which will cover all types of
antennas, so
> I feel its best to let the individual user decide which, if any,
type of
> tuner best serves thier needs.
>
> 2. The Elecraft T1 tuner is about as small as an auto tuner can
get. I
> can't make one any smaller or less expensively.
>
>
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://www.qsl.net/kd1jv/
> http://kd1jv.qrpradio.com
>
Steve,

Thanks! I have a T1 and agree. It's an amazing autotuner. It's
incredibly small, for what it does, but it's still larger than my ATS-

3A. For trail use the ATS-3A into a dipole may be just fine - a small balun might be of some value. For multiband operation with one balanced antenna, the BLT is hard to beat. I have built three BLT's now, for different frequency ranges, and they're very effective. My tests show them to have very low loss into reasonable loads.

The tuner question is highly personal and depends on the operator and what kind of operation he likes. I think that there is room for experimenting with portable tuners smaller than the T1 and the BLT. Networks for one band might fit into a cubic inch or two and still work OK.

The reality is that the ATS-3A is absurdly small, and a full-size portable dipole and feedline made of halfway durable materials will weigh more and take up more space in your pack than the rig! If you bring along any tools to put up your antenna - fishing pole, tennis ball, slingshot, throwline, portable mast, whatever - these will be much larger and heavier than the rig, tuner, etc.

After reading all the recent posts here about PSK and digital modes, Steve, I hope you're not swayed too much. Maybe there should be a dedicated radio for portable PSK, and that would be useful and cool; it might catch on and create demand - but adapting the ATS-3A for this seems a bit much - it's already customized so well for portable CW.

In a year or two, when the sunspot numbers rise, and 15M and then higher bands start opening up regularly for DX with low path losses, it would be way cool to have a tiny, efficient radio that would operate up through at least 10M. During the solar maximum in 1981 I played a game calling J's on 10 meters with an attic antenna - I would reduce the power of my homebrew tube rig to 1 or 2 watts and call those guys just to see if they'd come back. Of course, they almost always came back! If I had a rig like the ATS-3A for 10 meters, I could go up hills and mountains with a little fiberglass pole and a dipole, and work people all over the world easily. When we emerge from solar minimum, we're going to be very frustrated if 20 meters is our shortest wavelength. The scientists at NCAR predict that the next solar maximum will be much better than the last, and that's great news if you like 10 and 12 meters! Having SSB in a tiny portable radio would be cool too, although having both CW and SSW in one unit creates challenges.

Steve, having higher frequencies is my wish for a future rig. Solar minimum will not last all that much longer - a couple more years maybe.

If you were in this for profit and volume, you could post a survey and ask your customers what they would like. Then you could take the results of this marketing research back to your design lab and go from there. But...

I think some of the loudest voices on here lately don't represent the "silent majority" of us who think the ATS series is a really cool portable CW radio. Steve, you've created a nice group of loyal operators/customers - please create just what you want, because it's your fun and creativity that makes this whole thing so cool.

Thanks
KX0R

1012. Re: ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-23 00:34:40 UTC
From: radio_kx0r
Topic: 905 Message: 1012

--- In AT_Sprint@yahoogroups.com, "Joe Rocci" <joe@...> wrote:
>
> Chris,
> They're latching relays, so they only draw current for an instant
when they switch.
>
> Transistors and pin diodes aren't up to the job, as the RF currents
and RF voltages in the circuit can become quite high depending on the
load and how the tuner is set.
>
> Latching relays really are the best choice, but they're expensive.
>
> Joe
>
>
> ----- Original Message -----
> From: chris reeves
> To: AT_Sprint@yahoogroups.com
> Sent: Thursday, February 22, 2007 1:44 PM
> Subject: [AT_Sprint] Re: ATS3 and portable digital modes
>
>
> i just looked at the Elecraft T1 tuner. Are those miniture relays
in
> the unit? I would think transistors would work better and be less
> expensive?
>
> --- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@> wrote:
> >
> > >> If there is going to be a "3B", and it is going to be full
> featured.
> > >> How about a biult in tuner. or even an external tuner. i
have
> been
> >
> > There will be NO built in tuner. There are a number of resons
for
> this.
> >
> > 1. What type of tuner you use depends on what type of antenna
your
> using.
> >
> > If your using a classic dipole, you don't need a tuner.
Portable

> verticals
> > may or may not need a tuner.
> >
> > End feed antennas need radically different values in the tuner
> depending on
> > if its near 1/2 wave long or is much shorter than 1/2 wave.
> >
> > Balanced line feed antennas need thier own unique type of tuner.
> >
> > We can't make one type of tuner which will cover all types of
> antennas, so
> > I feel its best to let the individual user decide which, if
any,
> type of
> > tuner best serves thier needs.
> >
> > 2. The Elecraft T1 tuner is about as small as an auto tuner can
> get. I
> > can't make one any smaller or less expensively.
> >
> >
> > 72,
> > Steve, KD1JV
> > "Melt Solder"
> > White Mountains of New Hampshire
> > http://www.qsl.net/kd1jv/
> > http://kd1jv.qrpradio.com
> >
>
The Elecraft T1 has a bunch of tiny latching relays, and they draw a
few milliamps for a few seconds while the processor finds a match;
after that they draw no current. The T1 runs well on a 9V battery.
If you want a tiny auto tuner, this is a nice one; remember that the
output is unbalanced. If you want balanced output and add a balun,
cable, and connectors, the combination is larger than a balanced
tuner like a BLT, which costs much less.

72/73
KX0R

1013. RE: [AT_Sprint] Re: ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-23 02:02:24 UTC
From: Richard Bennett
Topic: 905 Message: 1013

I agree on the issue of the digital modes. It would be better to build a digital mode radio from the ground up.

Just an idea, what about an SDR QRP digital mode radio? Imagine just 3 connections, a mini-USB to a computer, an antenna connector and power. Let the software do the rest. With SMT and minimal parts count, it could be a tiny radio.

Unfortunately I do not have anywhere near the technical knowledge (or time) to tackle such a project, but would love to be a part of it!

May be somewhat off topic on the ATS list, but the thread got me thinking.

Rick

----- Original Message -----
From: radio_kx0r
To: AT_Sprint@yahoogroups.com
Sent: 02/22/2007 6:35:10 PM
Subject: [AT_Sprint] Re: ATS3 and portable digital modes

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
>
> >> If there is going to be a "3B", and it is going to be full
featured.
> >> How about a biult in tuner. or even an external tuner. i have
been
>
> There will be NO built in tuner. There are a number of resons for
this.
>
> 1. What type of tuner you use depends on what type of antenna your
using.
>
> If your using a classic dipole, you don't need a tuner. Portable
verticals
> may or may not need a tuner.
>
> End feed antennas need radically different values in the tuner
depending on
> if its near 1/2 wave long or is much shorter than 1/2 wave.
>
> Balanced line feed antennas need thier own unique type of tuner.
>
> We can't make one type of tuner which will cover all types of
antennas, so
> I feel its best to let the individual user decide which, if any,

type of
> tuner best serves thier needs.
>
> 2. The Elecraft T1 tuner is about as small as an auto tuner can
get. I
> can't make one any smaller or less expensively.
>
>
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://www.qsl.net/kd1jv/
> http://kd1jv.qrpradio.com
>
Steve,

Thanks! I have a T1 and agree. It's an amazing autotuner. It's incredibly small, for what it does, but it's still larger than my ATS-3A. For trail use the ATS-3A into a dipole may be just fine - a small balun might be of some value. For multiband operation with one balanced antenna, the BLT is hard to beat. I have built three BLT's now, for different frequency ranges, and they're very effective. My tests show them to have very low loss into reasonable loads.

The tuner question is highly personal and depends on the operator and what kind of operation he likes. I think that there is room for experimenting with portable tuners smaller than the T1 and the BLT. Networks for one band might fit into a cubic inch or two and still work OK.

The reality is that the ATS-3A is absurdly small, and a full-size portable dipole and feedline made of halfway durable materials will weigh more and take up more space in your pack than the rig! If you bring along any tools to put up your antenna - fishing pole, tennis ball, slingshot, throwline, portable mast, whatever - these will be much larger and heavier than the rig, tuner, etc.

After reading all the recent posts here about PSK and digital modes, Steve, I hope you're not swayed too much. Maybe there should be a dedicated radio for portable PSK, and that would be useful and cool; it might catch on and create demand - but adapting the ATS-3A for this seems a bit much - it's already customized so well for portable CW.

In a year or two, when the sunspot numbers rise, and 15M and then higher bands start opening up regularly for DX with low path losses, it would be way cool to have a tiny, efficient radio that would operate up through at least 10M. During the solar maximum in 1981 I played a game calling J's on 10 meters with an attic antenna - I would reduce the power of my homebrew tube rig to 1 or 2 watts and

call those guys just to see if they'd come back. Of course, they almost always came back! If I had a rig like the ATS-3A for 10 meters, I could go up hills and mountains with a little fiberglass pole and a dipole, and work people all over the world easily. When we emerge from solar minimum, we're going to be very frustrated if 20 meters is our shortest wavelength. The scientists at NCAR predict that the next solar maximum will be much better than the last, and that's great news if you like 10 and 12 meters! Having SSB in a tiny portable radio would be cool too, although having both CW and SSW in one unit creates challenges.

Steve, having higher frequencies is my wish for a future rig. Solar minimum will not last all that much longer - a couple more years maybe.

If you were in this for profit and volume, you could post a survey and ask your customers what they would like. Then you could take the results of this marketing research back to your design lab and go from there. But...

I think some of the loudest voices on here lately don't represent the "silent majority" of us who think the ATS series is a really cool portable CW radio. Steve, you've created a nice group of loyal operators/customers - please create just what you want, because it's your fun and creativity that makes this whole thing so cool.

Thanks
KX0R

1014. Re: [AT_Sprint] Re: ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-23 00:02:38 UTC
From: Richard Bennett
Topic: 905 Message: 1014

It is unfortunate that there is not a solid state solution to this type of switching. On the other hand, there are some distinct advantages to the latching relays. And the clickety-clack of the relays is kind of a pleasing sound - you know right away the tuner is doing something.

I have been thinking the T1 would be a good match for the ATS-3. About 1/3 of the enclosure space in it is for a battery. If one were to combine the ATS and the T1 and use a common power source, you could still have a very small package.

Of course as Steve pointed out, a resonant dipole is a great answer. There is a lot to be said for the utter simplicity and dipoles are great performers (my personal favorite).

de kc0pet, Rick

----- Original Message -----
From: Joe Rocci
To: AT_Sprint@yahoogroups.com
Sent: 02/22/2007 1:20:38 PM
Subject: Re: [AT_Sprint] Re: ATS3 and portable digital modes

Chris,
They're latching relays, so they only draw current for an instant when they switch.

Transistors and pin diodes aren't up to the job, as the RF currents and RF voltages in the circuit can become quite high depending on the load and how the tuner is set.

Latching relays really are the best choice, but they're expensive.

Joe

----- Original Message -----
From: chris reeves
To: AT_Sprint@yahoogroups.com
Sent: Thursday, February 22, 2007 1:44 PM
Subject: [AT_Sprint] Re: ATS3 and portable digital modes

i just looked at the Elecraft T1 tuner. Are those miniture relays in
the unit? I would think transistors would work better and be less
expensive?

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
>
> >> If there is going to be a "3B", and it is going to be full
featured.
> >> How about a biult in tuner. or even an external tuner. i have
been
>
> There will be NO built in tuner. There are a number of resons for

this.
>
> 1. What type of tuner you use depends on what type of antenna your
using.
>
> If your using a classic dipole, you don't need a tuner. Portable
verticals
> may or may not need a tuner.
>
> End feed antennas need radically different values in the tuner
depending on
> if its near 1/2 wave long or is much shorter than 1/2 wave.
>
> Balanced line feed antennas need thier own unique type of tuner.
>
> We can't make one type of tuner which will cover all types of
antennas, so
> I feel its best to let the individual user decide which, if any,
type of
> tuner best serves thier needs.
>
> 2. The Elecraft T1 tuner is about as small as an auto tuner can
get. I
> can't make one any smaller or less expensively.
>
>
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://www.qsl.net/kd1jv/
> http://kd1jv.qrpradio.com
>

1015. Re: ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-23 04:51:45 UTC
From: jgaffke
Topic: 905 Message: 1015

Hi Carey,

Steve said he was looking at making pins available on the MSP430
for an A2D and UART, and improving the key click filter.

There may not need to be any extra parts to allow PSK31 operation.
Everything he suggested would also pertain to CW operation.

Moving to an MSP430 with A2D would make things like a battery
monitor or SWR indicator possible.

If the UART is for PSK31 only, might as well use the key jack.
The RS232 level shifters could be in some optional cable assembly.
But a UART might also be useful for CW operations, allowing a
handheld computer to be used as a front panel to control the rig.
Or used to replace the current JTAG pins, if an MSP430F2*** is used.

The current key click filter should be looked into, as your
notes in the files section suggest.

I suspect improving CW operations will remain the primary objective
in the design of any "3B".

73's
Jerry Gaffke, KE7ER

--- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@...> wrote:
> After reading all the recent posts here about PSK and digital modes,
> Steve, I hope you're not swayed too much. Maybe there should be a
> dedicated radio for portable PSK, and that would be useful and cool;
> it might catch on and create demand - but adapting the ATS-3A for
> this seems a bit much - it's already customized so well for portable
> CW.

1016. Re: [AT_Sprint] Re: ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-23 07:58:23 UTC
From: Vojtěch Bubník
Topic: 905 Message: 1016

Hi Jerry.

> > 3) The signal is low pass filtered by a FIR filter with a
> > rectangle impulse response. ... The first sidelobe of the
> >lowpass filter is -14dB at cca +-47Hz from 500kHz carrier, at -18
> >at +-78Hz, -20dB at +-109Hz, -26dB at +-300Hz etc.
>
> Program pskuc.c shows errors pretty much taking over when the
> QRM is ~8x the amplitude, or 18dB. That agrees well with your
> analysis. How much stronger can a signal 100 Hz away be
> before the other popular PSK31 decoders start to fail?

Well, it is possible to design much better FIR filter than the rectangle one, most of the soundcard decoders will perform better at these conditions. I am not sure how often this situation appears in the real life though.

It may be interesting to try to design CPU efficient lowpass FIR filter using bit shifts, additions and subtractions. Just use some software for generating FIR filters, substitute the coefficients by the nearest bit shift and do the FFT analysis of the resulting filter.

73, Vojtech OK1IAK

1017. Re: [AT_Sprint] Re: ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-23 13:45:06 UTC
From: mstangelo@comcast.net
Topic: 905 Message: 1017

Richard,

Any solid state solution using PIN diodes would consume lots of power and PIN diodes for the HF range are not common these days. Latching relays are the most cost effective and power effective solution for a low power auto tuner.

You wanted a portable QRP tuner with a built-in tuner? Have you considered the Elecraft KX1?

Mike N2MS

<snip>-------------- Original message --------------
From: "Richard Bennett" <kc0pet@...>

It is unfortunate that there is not a solid state solution to this type of switching. On the other hand, there are some distinct advantages to the latching relays. And the clickety-clack of the relays is kind of a pleasing s

1018. Re: ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-23 16:29:59 UTC
From: jgaffke
Topic: 905 Message: 1018

Hi Vojtich,

At 500 Hz, we're parked at one end of the ATS3A passband.
Assuming 100 Hz signal spacing, there might be two other
signals to deal with. That's a bit different than feeding an
entire SSB passband into a soundcard.

A quick fix to deal with a bothersome signal (at least on the
lower bands) would be to switch the DDS frequency used on receive
over to the other side of the IF frequency.

Non-rectangular coefficients increase the workload quickly.
The dynamic range and selectivity we are now seeing with pskuc.c
might be sufficient, but it would be interesting to see how much
further the MSP430 can take this.

73's
Jerry Gaffke, KE7ER

--- In AT_Sprint@yahoogroups.com, Vojtìch Bubník <bubnikv@...> wrote:
> > > 3) The signal is low pass filtered by a FIR filter with a
> > > rectangle impulse response. ... The first sidelobe of the
> > >lowpass filter is -14dB at cca +-47Hz from 500kHz carrier, at -18
> > >at +-78Hz, -20dB at +-109Hz, -26dB at +-300Hz etc.
> >
> > Program pskuc.c shows errors pretty much taking over when the
> > QRM is ~8x the amplitude, or 18dB. That agrees well with your
> > analysis. How much stronger can a signal 100 Hz away be
> > before the other popular PSK31 decoders start to fail?
>
> Well, it is possible to design much better FIR filter than the
rectangle one, most of the soundcard decoders will perform better at
these conditions. I am not sure how often this situation appears in
the real life though.
>
> It may be interesting to try to design CPU efficient lowpass FIR
filter using bit shifts, additions and subtractions. Just use some
software for generating FIR filters, substitute the coefficients by
the nearest bit shift and do the FFT analysis of the resulting filter.

1019. Re: [AT_Sprint] Re: ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-24 03:11:00 UTC
From: kr4ez@aol.com
Topic: 905 Message: 1019

i have to agree the ats is an amaising rig. i think kx0r is right on the money. the small cw rig lets me have a great little rig to take camping and has more funtions than i can use. the extended bands seams much more ptactical for a compact rig. the tuner seamed like a good idea but as pointed out i was not considering the deversity of antennas in use. my non-resonant open feed dipole would not work with the majoritys coax feed setup.

-----Original Message-----

From: "radio_kx0r" <careyfuller@...>
Subj: [AT_Sprint] Re: ATS3 and portable digital modes
Date: Thu Feb 22, 2007 19:35
Size: 5K
To: AT_Sprint@yahoogroups.com

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
>
> >> If there is going to be a "3B", and it is going to be full
featured.
> >> How about a biult in tuner. or even an external tuner. i have
been
>
> There will be NO built in tuner. There are a number of resons for
this.
>
> 1. What type of tuner you use depends on what type of antenna your
using.
>
> If your using a classic dipole, you don't need a tuner. Portable
verticals
> may or may not need a tuner.
>
> End feed antennas need radically different values in the tuner
depending on
> if its near 1/2 wave long or is much shorter than 1/2 wave.
>
> Balanced line feed antennas need thier own unique type of tuner.
>
> We can't make one type of tuner which will cover all types of
antennas, so
> I feel its best to let the individual user decide which, if any,
type of
> tuner best serves thier needs.
>
> 2. The Elecraft T1 tuner is about as small as an auto tuner can
get. I
> can't make one any smaller or less expensively.

>
>
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://www.qsl.net/kd1jv/
> http://kd1jv.qrpradio.com
>
Steve,

Thanks! I have a T1 and agree. It's an amazing autotuner. It's incredibly small, for what it does, but it's still larger than my ATS-3A. For trail use the ATS-3A into a dipole may be just fine - a small balun might be of some value. For multiband operation with one balanced antenna, the BLT is hard to beat. I have built three BLT's now, for different frequency ranges, and they're very effective. My tests show them to have very low loss into reasonable loads.

The tuner question is highly personal and depends on the operator and what kind of operation he likes. I think that there is room for experimenting with portable tuners smaller than the T1 and the BLT. Networks for one band might fit into a cubic inch or two and still work OK.

The reality is that the ATS-3A is absurdly small, and a full-size portable dipole and feedline made of halfway durable materials will weigh more and take up more space in your pack than the rig! If you bring along any tools to put up your antenna - fishing pole, tennis ball, slingshot, throwline, portable mast, whatever - these will be much larger and heavier than the rig, tuner, etc.

After reading all the recent posts here about PSK and digital modes, Steve, I hope you're not swayed too much. Maybe there should be a dedicated radio for portable PSK, and that would be useful and cool; it might catch on and create demand - but adapting the ATS-3A for this seems a bit much - it's already customized so well for portable CW.

In a year or two, when the sunspot numbers rise, and 15M and then higher bands start opening up regularly for DX with low path losses, it would be way cool to have a tiny, efficient radio that would operate up through at least 10M. During the solar maximum in 1981 I played a game calling J's on 10 meters with an attic antenna - I would reduce the power of my homebrew tube rig to 1 or 2 watts and call those guys just to see if they'd come back. Of course, they almost always came back! If I had a rig like the ATS-3A for 10 meters, I could go up hills and mountains with a little fiberglass pole and a dipole, and work people all over the world easily. When we emerge from solar minimum, we're going to be very frustrated if 20 meters is our shortest wavelength. The scientists at NCAR predict

that the next solar maximum will be much better than the last, and that's great news if you like 10 and 12 meters! Having SSB in a tiny portable radio would be cool too, although having both CW and SSW in one unit creates challenges.

Steve, having higher frequencies is my wish for a future rig. Solar minimum will not last all that much longer - a couple more years maybe.

If you were in this for profit and volume, you could post a survey and ask your customers what they would like. Then you could take the results of this marketing research back to your design lab and go from there. But...

I think some of the loudest voices on here lately don't represent the "silent majority" of us who think the ATS series is a really cool portable CW radio. Steve, you've created a nice group of loyal operators/customers - please create just what you want, because it's your fun and creativity that makes this whole thing so cool.

Thanks
KX0R

Yahoo! Groups - Join or create groups, clubs, forums & communities. Links

1020. Re: ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-24 07:20:28 UTC
From: jgaffke
Topic: 905 Message: 1020

Hi Vojtich,

--- In AT_Sprint@yahoogroups.com, "jgaffke" <jgaffke@...> wrote:
> Program pskuc.c shows errors pretty much taking over when the
> QRM is ~8x the amplitude, or 18dB. That agrees well with your
> analysis.

That's 18dB when the QRM is 200 Hz away, not the 100 Hz I was suggesting. At 100 Hz separation, see errors take over at around 9dB. Not sure how "errors taking over" fits in with your analysis.

73's,
Jerry Gaffke, KE7ER

1021. Re: [AT_Sprint] Re: ATS3 and portable digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-24 13:11:37 UTC
From: Karl Larsen
Topic: 905 Message: 1021

I have the T1 auto tuner and it's VERY nice. Steve is right you can't do
better for a QRP radio. But there's a problem with this tuner when your
using an ATS3. While the tuner is tuning it gives some weird impedance
to my ATS3 transmitter and when it hits a critical point the ATS3
re-boots. This is 100% repeatable.

I built a in-line 25 ohm resistor that fixes this problem. But it's a
pain to put in and take out every time. But it does give you a perfect
match to my portable antenna which is 85 feet end fed with 2 conterpoise
wires.

Karl K5DI

kr4ez@... wrote:
> i have to agree the ats is an amaising rig. i think kx0r is right on the money. the small cw rig lets me have a great little rig to take camping and has more funtions than i can use. the extended bands seams much more ptactical for a compact rig. the tuner seamed like a good idea but as pointed out i was not considering the deversity of antennas in use. my non-resonant open feed dipole would not work with the majoritys coax feed setup.
>
> -----Original Message-----
>
> From: "radio_kx0r" <careyfuller@...>
> Subj: [AT_Sprint] Re: ATS3 and portable digital modes
> Date: Thu Feb 22, 2007 19:35
> Size: 5K
> To: AT_Sprint@yahoogroups.com
>
> --- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
>
>>>> If there is going to be a "3B", and it is going to be full
>>>>
> featured.
>
>>>> How about a biult in tuner. or even an external tuner. i have
>>>>
> been
>
>> There will be NO built in tuner. There are a number of resons for
>>
> this.
>
>>
>> 1. What type of tuner you use depends on what type of antenna your
>>
> using.

>
>> If your using a classic dipole, you don't need a tuner. Portable
>>
> verticals
>
>> may or may not need a tuner.
>>
>> End feed antennas need radically different values in the tuner
>>
> depending on
>
>> if its near 1/2 wave long or is much shorter than 1/2 wave.
>>
>> Balanced line feed antennas need thier own unique type of tuner.
>>
>> We can't make one type of tuner which will cover all types of
>>
> antennas, so
>
>> I feel its best to let the individual user decide which, if any,
>>
> type of
>
>> tuner best serves thier needs.
>>
>> 2. The Elecraft T1 tuner is about as small as an auto tuner can
>>
> get. I
>
>> can't make one any smaller or less expensively.
>>
>>
>> 72,
>> Steve, KD1JV
>> "Melt Solder"
>> White Mountains of New Hampshire
>> http://www.qsl.net/kd1jv/
>> http://kd1jv.qrpradio.com
>>
>>
> Steve,
>
> Thanks! I have a T1 and agree. It's an amazing autotuner. It's
> incredibly small, for what it does, but it's still larger than my ATS-
> 3A. For trail use the ATS-3A into a dipole may be just fine - a
> small balun might be of some value. For multiband operation with one
> balanced antenna, the BLT is hard to beat. I have built three BLT's
> now, for different frequency ranges, and they're very effective. My
> tests show them to have very low loss into reasonable loads.
>

> The tuner question is highly personal and depends on the operator and
> what kind of operation he likes. I think that there is room for
> experimenting with portable tuners smaller than the T1 and the BLT.
> Networks for one band might fit into a cubic inch or two and still
> work OK.
>
> The reality is that the ATS-3A is absurdly small, and a full-size
> portable dipole and feedline made of halfway durable materials will
> weigh more and take up more space in your pack than the rig! If you
> bring along any tools to put up your antenna - fishing pole, tennis
> ball, slingshot, throwline, portable mast, whatever - these will be
> much larger and heavier than the rig, tuner, etc.
>
> After reading all the recent posts here about PSK and digital modes,
> Steve, I hope you're not swayed too much. Maybe there should be a
> dedicated radio for portable PSK, and that would be useful and cool;
> it might catch on and create demand - but adapting the ATS-3A for
> this seems a bit much - it's already customized so well for portable
> CW.
>
> In a year or two, when the sunspot numbers rise, and 15M and then
> higher bands start opening up regularly for DX with low path losses,
> it would be way cool to have a tiny, efficient radio that would
> operate up through at least 10M. During the solar maximum in 1981 I
> played a game calling J's on 10 meters with an attic antenna - I
> would reduce the power of my homebrew tube rig to 1 or 2 watts and
> call those guys just to see if they'd come back. Of course, they
> almost always came back! If I had a rig like the ATS-3A for 10
> meters, I could go up hills and mountains with a little fiberglass
> pole and a dipole, and work people all over the world easily. When
> we emerge from solar minimum, we're going to be very frustrated if 20
> meters is our shortest wavelength. The scientists at NCAR predict
> that the next solar maximum will be much better than the last, and
> that's great news if you like 10 and 12 meters! Having SSB in a tiny
> portable radio would be cool too, although having both CW and SSW in
> one unit creates challenges.
>
> Steve, having higher frequencies is my wish for a future rig. Solar
> minimum will not last all that much longer - a couple more years
> maybe.
>
> If you were in this for profit and volume, you could post a survey
> and ask your customers what they would like. Then you could take the
> results of this marketing research back to your design lab and go
> from there. But...
>
> I think some of the loudest voices on here lately don't represent
> the "silent majority" of us who think the ATS series is a really cool
> portable CW radio. Steve, you've created a nice group of loyal
> operators/customers - please create just what you want, because it's

> your fun and creativity that makes this whole thing so cool.
>
> Thanks
> KX0R
>
>
>
>
>
> Yahoo! Groups - Join or create groups, clubs, forums & communities. Links
>
>
>
>
>
>
>
>
>
> Yahoo! Groups - Join or create groups, clubs, forums & communities. Links
>
>
>
>
>
>

1022. My ATS-3 is nearing completion

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-24 19:01:24 UTC
From: Jeff - JWID
Topic: 1022 Message: 1022

Well ...

After a long time of having little spare time, I managed to piece together a couple hours this week. I have the case all painted (deep green) and have just finished soldering all of the surface mount components. Not as hard as it was made out to be, and it LOOKS as though all the parts are soldered correctly. Time will tell ...

Now to start the thru-hole parts tonight, and print the decals for the case.

73/72
Jeff - VA3JFF

1023. New ATS-3 on the air

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-25 04:35:42 UTC
From: dave
Topic: 1023 Message: 1023

A new ATS-3 took to the airways tonite. Finally completed the kit
that has been here for about 2 years. Worth the wait though . . .

First contact was on 40m with LZ4UU calling 'CQ test' from Bulgaria.
Unfortunately I fumble-butted my call and was not able to correct it
so that Q goes to someone else . . .

But *I* know I made it even if it never shows up in the contest log.

Then chatted with KE2EB in NC and K1OV (qrp/qrp) in CT (my qth is near
Mobile, AL). All on 40m. Seems to be a good little rig. Think I
will enjoy using it.

Have enjoyed reading all the informative posts on here. Keep up the
FB work!

73 de dave
ab9ca

1024. ATS-3B progress

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-25 20:20:08 UTC
From: Steven Weber
Topic: 905 Message: 1024

I've decided to make only minimual changes to the -3A to migrate it to the -3B. The primary change will be to add 17 and 15 meters as standard. Limiting it to 15 meters will keep the rig current reasonable. The current starts to get pretty high if we push it to cover 10 meters.

Adding two bands and keeping the rig so it automatically detects each band module requires changing how the band modules are read by the processor. To do this, the processor reads a voltage from the band module, created by a voltage divider comprised of one of the 47K pull up resistors and a unique resistor value on each band module. Rather than using the more expensive processor with A2D converter, I implemented a simple slope A/D converter with the comparator in the F1121A.

It works by measuring the time it takes to charge a capacitor to 1/2 the processor supply voltage, as generated by the internal voltage reference. The capacitor is then discharged back to 0 volts and then measures the time it takes for the cap to charge up to the voltage generated by the band module resistor divider, which is always less than 1/2 the supply voltage.

By dividing the intial capacitor charging time into 8 time windows, we can now compare the band module voltage charging time to find which window it falls into to determine the band module which created that voltage.

After doing all this, I found the firmware now uses 4002 words out of a possible 4096. Prety darn close to full!

Some other minor hardware changes -

QSK swich now controlled by the MUTE port only. This required adding an extra 2N7002 as an inverter. Series gate resistor and by pass cap added to isolate it from the mute port. Found out this is the primary path for excessive audio key clicks produced on the higher bands.

Made the board mounting holes larger so swag shoulder spacers can be used, like on the the QBSA board. This eliminates the nut and will make mounting the board into a case easier.

Connections to uP reset chip fixed.
Fixed trimmer cap spacing on band modules.

I'll probibly start collecting parts for this version soon. Hope to have most of the parts on hand by the time I leave for my spring hiking trip in mid April and be ready to start kitting when I get back, 4-6 weeks later.

72,
Steve, KD1JV
"Melt Solder"

White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

1025. Re: [AT_Sprint] ATS-3B progress

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-25 20:49:25 UTC
From: kb2tqx
Topic: 905 Message: 1025

Steve,

Why not go with the MSP430F2131 chip for the ATS-3B? Pin compatible with the 1121A, twice the flash code space, twice the speed, built-in pullup resistors, built-in brown-out.

72/73,

Dave
KB2TQX,

kb2tqx@...
2007-02-25

1026. ATS-3, A, B?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-25 23:55:18 UTC
From: Bob cutter
Topic: 1026 Message: 1026

I built and use the original, I believe that would be an ATS-3.

Do the 3A and the proposed 3B use the same type plug-in boards for band change?

72, Bob KI0G

Looking for earth-friendly autos?
Browse Top Cars by "Green Rating" at Yahoo! Autos' Green Center.

1027. Re: [AT_Sprint] ATS-3, A, B?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-26 00:02:43 UTC
From: Karl Larsen
Topic: 1026 Message: 1027

No. The B will have new band marking resistors on it.. And of course
there are two more bands.

Karl

Bob cutter wrote:
> I built and use the original, I believe that would be an ATS-3.
>
> Do the 3A and the proposed 3B use the same type plug-in boards for
> band change?
>
> 72, Bob KI0G
>
> ---
> Looking for earth-friendly autos?
> Browse Top Cars by "Green Rating"
> <http://autos.yahoo.com/green_center/;_ylc=X3oDMTE4MGw4Z2hlBF9TAzk3MTA3MDc2BHNlYwNtYWlsdGFncwRzbGsDZ3JlZW5jZW50ZXI->
> at Yahoo! Autos' Green Center.

1029. Re: [AT_Sprint] ATS-3, A, B?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-26 00:21:45 UTC
From: Bob cutter
Topic: 1026 Message: 1029

The B will have no plug-in boards, correct? Did the A have plug-in boards?

72, Bob

72, Bob KI0G

Karl Larsen <k5di@...> wrote:
No. The B will have new band marking resistors on it.. And of course
there are two more bands.

Karl

Bob cutter wrote:
> I built and use the original, I believe that would be an ATS-3.
>
> Do the 3A and the proposed 3B use the same type plug-in boards for
> band change?
>
> 72, Bob KI0G
>
> ---
> Looking for earth-friendly autos?
> Browse Top Cars by "Green Rating"
>
> at Yahoo! Autos' Green Center.

Yahoo! Groups Links

Bored stiff? Loosen up...
Download and play hundreds of games for free on Yahoo! Games.

1030. Re: [AT_Sprint] ATS-3, A, B?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-26 00:20:05 UTC
From: Michael Harnage
Topic: 1026 Message: 1030

Karl is correct.

More importantly the 3 filter board differ from the 3A
boards and presumably the 3B boards will differ from
the 3 and 3A boards. None will be easily
interchangable.

-mike

--- Bob cutter <ki0g@...> wrote:

> I built and use the original, I believe that would
> be an ATS-3.
>
> Do the 3A and the proposed 3B use the same type
> plug-in boards for band change?
>
> 72, Bob KI0G
>
>
> ---------------------------------
> Looking for earth-friendly autos?
> Browse Top Cars by "Green Rating" at Yahoo! Autos'
> Green Center.

8:00? 8:25? 8:40? Find a flick in no time
with the Yahoo! Search movie showtime shortcut.
http://tools.search.yahoo.com/shortcuts/#news

1031. Re: [AT_Sprint] ATS-3, A, B?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-26 00:26:49 UTC
From: Karl Larsen
Topic: 1026 Message: 1031

Bob read the message that Steve has about the new kit.

Karl

Bob cutter wrote:
> The B will have no plug-in boards, correct? Did the A have plug-in
> boards?
>
> 72, Bob
>
> 72, Bob KI0G
>
> */Karl Larsen <k5di@...>/* wrote:
>
> No. The B will have new band marking resistors on it.. And of course
> there are two more bands.
>
> Karl
>
>
>
> Bob cutter wrote:
> > I built and use the original, I believe that would be an ATS-3.
> >
> > Do the 3A and the proposed 3B use the same type plug-in boards for
> > band change?
> >
> > 72, Bob KI0G
> >
> >
> ---
> > Looking for earth-friendly autos?
> > Browse Top Cars by "Green Rating"
> >
> > at Yahoo! Autos' Green Center.
>
>
>
> ---------- Yahoo! Groups Sponsor
>
>
>
> Yahoo! Groups Links
>
>

>
>
> ---
> Bored stiff?
> <http://us.rd.yahoo.com/evt=49935/*http://games.yahoo.com> Loosen up...
> Download and play hundreds of games for free
> <http://us.rd.yahoo.com/evt=49935/*http://games.yahoo.com> on Yahoo!
> Games.

1032. Re: ATS-3B progress

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-26 00:54:10 UTC
From: jgaffke
Topic: 905 Message: 1032

Hi Steve,

Are you considering any changes to the key click filter?
Perhaps make Q3 work as a constant current source.
Maybe a 4v zener across R14 if constant turn off times are an issue.

Jerry Gaffke, KE7ER

1033. Re: [AT_Sprint] ATS-3, A, B?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-26 00:09:55 UTC
From: Bill Noyce
Topic: 1026 Message: 1033

They all use plug-in boards, but the boards are not compatible.
-- Bill, AB1AV

> Do the 3A and the proposed 3B use the same type plug-in boards for band change?
>
> 72, Bob KI0G

1034. ATS3 For Sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-26 01:59:19 UTC
From: Norm Klieman
Topic: 1034 Message: 1034

Hi Everyone - Due to some medical bills, I need to sell my ATS3. I just bought it about 6 weeks ago from John VE3NFK who build it. It is in excellent condition and works great. All modules included and power plug.

Price - $180 plus shipping.

Reply to k9nk@...

72's Norm K9NK

1035. Re: ATS-3B progress

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-26 03:56:57 UTC
From: jgaffke
Topic: 905 Message: 1035

Steve.

Consider adding series resistors on the two keyer lines so the
MSP430's ESD protection diodes have a fighting chance.

Ever wrestle with a nylon sleeping bag in sub-freezing weather,
watching the sparks fly? Imagine touching the keyer on the wrong spot.

Or imagine a miss-wire in some RS232 level shifter that gets
jacked into the keyer connector.

73's
Jerry Gaffke, KE7ER

--- In AT_Sprint@yahoogroups.com, "jgaffke" <jgaffke@...> wrote:
>
> Hi Steve,
>
> Are you considering any changes to the key click filter?
> Perhaps make Q3 work as a constant current source.
> Maybe a 4v zener across R14 if constant turn off times are an issue.
>
> Jerry Gaffke, KE7ER
>

1036. Re: [AT_Sprint] ATS-3B progress

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-26 05:11:57 UTC
From: Roland Whitsitt
Topic: 905 Message: 1036

Ewww goodie! I'll start saving up for it now! Thanks for the heads up.
Roland
N5VWN
----- Original Message -----
From: Steven Weber
To: AT_Sprint@yahoogroups.com
Sent: Sunday, February 25, 2007 12:20 PM
Subject: [AT_Sprint] ATS-3B progress

I've decided to make only minimual changes to the -3A to migrate it to the -3B. The primary change will be to add 17 and 15 meters as standard. Limiting it to 15 meters will keep the rig current reasonable. The current starts to get pretty high if we push it to cover 10 meters.

Adding two bands and keeping the rig so it automatically detects each band module requires changing how the band modules are read by the processor. To do this, the processor reads a voltage from the band module, created by a voltage divider comprised of one of the 47K pull up resistors and a unique resistor value on each band module. Rather than using the more expensive processor with A2D converter, I implemented a simple slope A/D converter with the comparator in the F1121A.

It works by measuring the time it takes to charge a capacitor to 1/2 the processor supply voltage, as generated by the internal voltage reference. The capacitor is then discharged back to 0 volts and then measures the time it takes for the cap to charge up to the voltage generated by the band module resistor divider, which is always less than 1/2 the supply voltage.

By dividing the intial capacitor charging time into 8 time windows, we can now compare the band module voltage charging time to find which window it falls into to determine the band module which created that voltage.

After doing all this, I found the firmware now uses 4002 words out of a possible 4096. Prety darn close to full!

Some other minor hardware changes -

QSK swich now controlled by the MUTE port only. This required adding an extra 2N7002 as an inverter. Series gate resistor and by pass cap added to isolate it from the mute port. Found out this is the primary path for excessive audio key clicks produced on the higher bands.

Made the board mounting holes larger so swag shoulder spacers can be used, like on the the QBSA board. This eliminates the nut and will make mounting the board into a case easier.

Connections to uP reset chip fixed.
Fixed trimmer cap spacing on band modules.

I'll probibly start collecting parts for this version soon. Hope to have most of the parts on hand by the time I leave for my spring hiking trip in mid April and be ready to start kitting when I get back, 4-6 weeks later.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

1037. ATS 3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-26 05:51:57 UTC
From: Tim Keene
Topic: 1037 Message: 1037

Hey Steve, what about putting wideband like the 3 model? Is that possible with mods you are doing to the 3b? I use the WB mode all the time on 80meters with the crowd I hang out with.
Tim K5DEZ

1038. Re: [AT_Sprint] ATS-3B progress

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-26 07:04:19 UTC
From: Vojtěch Bubník
Topic: 905 Message: 1038

Hi Steve.

I am seriously working on the digital modes. Well, did not change a single line in the firmware yet, but I studied the MSP430 documentation and nearly finished the FET programmer.

> After doing all this, I found the firmware now uses 4002 words out of a
> possible 4096. Prety darn close to full!

May you please use a controller with more ROM? Otherwise I would have to comment out part of the original firmware to fit the new stuff. I think there are pin and program compatible and only slightly more expensive variants, like MSP430F1132, MSP430F1232 or even MSP430F2131 as KB2TQX suggested.

One thing to consider for digital modes. The crystal filter is too narrow for wide modes. It would be nice to have a panoramatic mode for PSK31 and it would even be easier to search for CW stations using a wider filter. Would it be possible to widen the filter by varicaps like in the Elecraft RIGs? I think two or three steps selectable from the menu shall be enough. I suppose generating the tuning voltage by 2 processor pins and three resistors may create a sufficient 4 bit D/A.

Thanks for your excellent work indeed!

73, Vojtech OK1IAK

1039. Re: ATS-3B progress

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-26 14:35:38 UTC
From: Ann
Topic: 905 Message: 1039

Yippiee!!!!!!!! Very cool!!!!!
Count me in!!!!!!

73/88
Ann
K1QO (formerly AB1DR)

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
>
> I've decided to make only minimual changes to the -3A to migrate it
to the
> -3B. The primary change will be to add 17 and 15 meters as standard.

1040. Re: [AT_Sprint] Re: ATS-3B progress

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-26 15:55:31 UTC
From: Karl Larsen
Topic: 905 Message: 1040

Hi Ann, I too plan to buy an ATS3B and I WILL mount the surface mount components using the Cash Olsen system with special solder bearing paste. This will speed up construction and keep me from making so many darn errors!

72/73 Karl K5DI

Ann wrote:
> Yippiee!!!!!!!! Very cool!!!!!
> Count me in!!!!!!
>
> 73/88
> Ann
> K1QO (formerly AB1DR)
>
>
>
>
> --- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
>
>> I've decided to make only minimual changes to the -3A to migrate it
>>
> to the
>
>> -3B. The primary change will be to add 17 and 15 meters as standard.
>>
>
>
>
>
>
>
> Yahoo! Groups Links
>
>
>
>
>
>
>

1041. ATS-3B progress

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-26 19:17:57 UTC
From: Frank Henrikson
Topic: 905 Message: 1041

Steve don't let all the sideline cooks ruin your projects! Design and build the kit you want! I will be there to buy it! I appreciate all the work you go to, so you can provide us with kits. Maybe it is time for some of the sideline cooks to offer their own kits!

Frank
KL0SW

1042. Re: ATS-3B progress

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-26 19:25:21 UTC
From: duolian99
Topic: 905 Message: 1042

Excellent news, Steve. What (or how many?) band modules will it
come with? Adding 17m and 15m to the original four gives six bands -
however the eight time windows seems to imply seven bands?
Personally, I have no interest in 160m and 80m - they require
excessively large antennas out of keeping with the small size of the
rig (ie rather like grafting an elephant trunk onto a mouse) and I
wonder how many others really want/use these bands.(poll or vote?)
If you were to have stayed with the 4 bnd format then my own
interest would have been for 40, 20, 17, 15m. Will you go with the
80mhz clock or something lower (to save on current drain). Is it
possible to increase the tuning speed on this version? The high
bands will be nice for DX'ing - 17m is open almost every day to
Europe and 15m will be soon....
73, Charlie ke2sp

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
>
> I've decided to make only minimual changes to the -3A to migrate
it to the
> -3B. The primary change will be to add 17 and 15 meters as
standard.
> Limiting it to 15 meters will keep the rig current reasonable. The
current
> starts to get pretty high if we push it to cover 10 meters.
>
> Adding two bands and keeping the rig so it automatically detects
each band
> module requires changing how the band modules are read by the
processor. To
> do this, the processor reads a voltage from the band module,
created by a
> voltage divider comprised of one of the 47K pull up resistors and
a unique
> resistor value on each band module. Rather than using the more
expensive
> processor with A2D converter, I implemented a simple slope A/D
converter
> with the comparator in the F1121A.
>
> It works by measuring the time it takes to charge a capacitor to
1/2 the
> processor supply voltage, as generated by the internal voltage
reference.
> The capacitor is then discharged back to 0 volts and then measures
the time

> it takes for the cap to charge up to the voltage generated by the
band
> module resistor divider, which is always less than 1/2 the supply
voltage.
>
> By dividing the intial capacitor charging time into 8 time
windows, we can
> now compare the band module voltage charging time to find which
window it
> falls into to determine the band module which created that
voltage.
>
> After doing all this, I found the firmware now uses 4002 words out
of a
> possible 4096. Prety darn close to full!
>
> Some other minor hardware changes -
>
> QSK swich now controlled by the MUTE port only. This required
adding an
> extra 2N7002 as an inverter. Series gate resistor and by pass cap
added to
> isolate it from the mute port. Found out this is the primary path
for
> excessive audio key clicks produced on the higher bands.
>
> Made the board mounting holes larger so swag shoulder spacers can
be used,
> like on the the QBSA board. This eliminates the nut and will make
mounting
> the board into a case easier.
>
> Connections to uP reset chip fixed.
> Fixed trimmer cap spacing on band modules.
>
> I'll probibly start collecting parts for this version soon. Hope
to have
> most of the parts on hand by the time I leave for my spring hiking
trip in
> mid April and be ready to start kitting when I get back, 4-6 weeks
later.
>
>
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://www.qsl.net/kd1jv/
> http://kd1jv.qrpradio.com
>

1043. Re: [AT_Sprint] Re: ATS-3B progress

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-26 19:37:43 UTC
From: Karl Larsen
Topic: 905 Message: 1043

duolian99 wrote:
> Excellent news, Steve. What (or how many?) band modules will it
> come with?
Just do the math. 80 40 30 20 17 and 15 = 6 band modules.
> Adding 17m and 15m to the original four gives six bands -
> however the eight time windows seems to imply seven bands?
> Personally, I have no interest in 160m and 80m - they require
> excessively large antennas out of keeping with the small size of the
> rig (ie rather like grafting an elephant trunk onto a mouse) and I
> wonder how many others really want/use these bands.(poll or vote?)
I use 80 Meters often and my modest portable antenna works just
great on 80 meters. So I am NOT in favor of deleting 80 Meters.

>
> If you were to have stayed with the 4 bnd format then my own
> interest would have been for 40, 20, 17, 15m. Will you go with the
> 80mhz clock or something lower (to save on current drain). Is it
> possible to increase the tuning speed on this version? The high
> bands will be nice for DX'ing - 17m is open almost every day to
> Europe and 15m will be soon....
> 73, Charlie ke2sp
>
>
>
Charlie I think your best idea is to buy the ATS3B and then you can
not use 80 meters :-)

72/73 Karl K5DI

> --- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
>
>> I've decided to make only minimual changes to the -3A to migrate
>>
> it to the
>
>> -3B. The primary change will be to add 17 and 15 meters as
>>
> standard.
>
>> Limiting it to 15 meters will keep the rig current reasonable. The
>>
> current
>
>> starts to get pretty high if we push it to cover 10 meters.
>>
>> Adding two bands and keeping the rig so it automatically detects

>>
> each band
>
>> module requires changing how the band modules are read by the
>>
> processor. To
>
>> do this, the processor reads a voltage from the band module,
>>
> created by a
>
>> voltage divider comprised of one of the 47K pull up resistors and
>>
> a unique
>
>> resistor value on each band module. Rather than using the more
>>
> expensive
>
>> processor with A2D converter, I implemented a simple slope A/D
>>
> converter
>
>> with the comparator in the F1121A.
>>
>> It works by measuring the time it takes to charge a capacitor to
>>
> 1/2 the
>
>> processor supply voltage, as generated by the internal voltage
>>
> reference.
>
>> The capacitor is then discharged back to 0 volts and then measures
>>
> the time
>
>> it takes for the cap to charge up to the voltage generated by the
>>
> band
>
>> module resistor divider, which is always less than 1/2 the supply
>>
> voltage.
>
>> By dividing the intial capacitor charging time into 8 time
>>
> windows, we can
>
>> now compare the band module voltage charging time to find which

>>
> window it
>
>> falls into to determine the band module which created that
>>
> voltage.
>
>> After doing all this, I found the firmware now uses 4002 words out
>>
> of a
>
>> possible 4096. Prety darn close to full!
>>
>> Some other minor hardware changes -
>>
>> QSK swich now controlled by the MUTE port only. This required
>>
> adding an
>
>> extra 2N7002 as an inverter. Series gate resistor and by pass cap
>>
> added to
>
>> isolate it from the mute port. Found out this is the primary path
>>
> for
>
>> excessive audio key clicks produced on the higher bands.
>>
>> Made the board mounting holes larger so swag shoulder spacers can
>>
> be used,
>
>> like on the the QBSA board. This eliminates the nut and will make
>>
> mounting
>
>> the board into a case easier.
>>
>> Connections to uP reset chip fixed.
>> Fixed trimmer cap spacing on band modules.
>>
>> I'll probibly start collecting parts for this version soon. Hope
>>
> to have
>
>> most of the parts on hand by the time I leave for my spring hiking
>>
> trip in
>

>> mid April and be ready to start kitting when I get back, 4-6 weeks
>>
> later.
>
>> 72,
>> Steve, KD1JV
>> "Melt Solder"
>> White Mountains of New Hampshire
>> http://www.qsl.net/kd1jv/
>> http://kd1jv.qrpradio.com
>>
>>
>
>
>
>
>
>
> Yahoo! Groups Links
>
>
>
>
>
>

1044. Re: [AT_Sprint] Re: ATS-3B progress

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-26 19:43:25 UTC
From: John A. Evans - N0HJ
Topic: 905 Message: 1044

That really doesn't answer the question, Karl, as the ATS-3B could have the capability of doing 160m as well. Whether Steve, KD1JV, decides to provide this option, is still up in the air. His post only mentioned adding 17m and 15m, so perhaps you are correct. However, Lutz Bergner has already modified an ATS-3 for 160m as well, so it is a possibility. I am sure that Steve will come out with specs when he is ready.

72 - john - n0hj

Karl Larsen wrote:
>
> duolian99 wrote:
> > Excellent news, Steve. What (or how many?) band modules will it
> > come with?
> Just do the math. 80 40 30 20 17 and 15 = 6 band modules.
>

1045. ATS3B kit

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-26 19:54:22 UTC
From: Karl Larsen
Topic: 1045 Message: 1045

We have seen a lot of people who want to help Steven KD1JV design his new kit. But none of the help considers the lead time he has to have to put the kit together. I read and re-read his message on this list and yes it isn't exactly what I would have done, but Steven is DOING IT!

I have decided to buy the ATS3B and I am already getting the things ready to build the kit using the special solder laden flux and then when ALL the chips are in place apply heat and the board is done, almost.

Today I bought a cheap electric burner at Wal Mart and right now I'm adjusting the heat so the temperature is near 200 F. This is the proper pre-heat. Just checked it and the temperature is right on. I marked the setting.

72/73 Karl K5DI

1046. Re: [AT_Sprint] Re: ATS-3B progress

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-27 00:35:21 UTC
From: Steven Weber
Topic: 905 Message: 1046

The -3B will be six bands, the current 80-20 plus 17 and 15.

Enough people wanted 80 to make it worth making everyone pay for it. The ATS having 80M might be one reason so many contacts are made on that band in the winter during Spartin Sprints. OTOH, not too many people have an antenna for 160, so it makes no sense making everyone pay for a band few can use.

I divided the time count into 8 segements as its a lot easier to divide by 8 (rotate right three times) than it is to divide by 6.

I decided to limit the upper band to 15, so the DDS clock only had to go to 60 MHz. That will keep the supply current at a reasonable value. With a 80 MHz clock, the rig draws over 50 ma, which is getting a bit high. At 60 MHz, it should be in the 30's.

Bottom line is it's impossible to make one rig do all the things everyone wants. Especially a rig as small as the ATS. The ATS rigs are ment to be the smallest, lightest, most effiecent CW rigs around. It makes no sense to try and make it anything else. Have different objectives - get a different rig<G>

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

1047. Re: [AT_Sprint] Re: ATS-3B progress

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-27 01:25:35 UTC
From: John A. Evans - N0HJ
Topic: 905 Message: 1047

I love it as planned, Steve - great little rig. I do have one request, if possible - could you make some extra band module boards for those of us who would like to experiment? I'd gladly buy 4 to 6 extra module boards just to play with in the future.

72 - john - n0hj

Steven Weber wrote:
>
> The -3B will be six bands, the current 80-20 plus 17 and 15.
>

1048. MS15/MS30

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-27 14:45:32 UTC
From: W2AGN
Topic: 1048 Message: 1048

Finished my "waterproof" MS15/MS30 rig. While not an AT Sprint, it was a predecessor by Steve, KD1JV. One complaint was that there was some drift, and the transmit offset was "iffy." SO, I used a DDS VFO (FCC1/FCC2). Stable, and I can use any transmit receive offset just by programming it. A side benefit is that the rig will work RTTY! I also added an NEScaf audio filter and Picokeyer to the box.

I am sorry to say I did not build the MS15 or MS30 boards. I did build the rest of it. Works great, with about 3.5 watts out on 15, and 5+ (actually 7, if turned up) on 30M. I cranked it back to 2W and tried RTTY, and that seems to work, also, although didn't make a contact. (Not many RTTY on at the time). Decoded well from a secondary receiver, though.

Pictures at http://w2agn.net/ms1530.html
--

_ _ _ _ _
/ \ / \ / \ / \ / \ John L. Sielke
(W)(2)(A)(G)(N) http://w2agn.net
_/ _/ _/ _/ _/ http://www.blurty.com/users/w2agn
check out: http://groups.yahoo.com/group/QRPariahs/

1049. Re: ATS-3B progress

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-27 16:13:19 UTC
From: duolian99
Topic: 905 Message: 1049

Karl,
It's good to hear that you use 80 meters with a 'modest portable antenna' and get good results. Perhaps you could explain or describe this antenna, because I would love to try it. My operating situation currently is a third floor apartment, FT-817, and homebrew shorty antenna (22 ft long, with tapped PVC loading coils for 40, 30, 20, 17, 15m)mounted on the balcony. It gets out nicely with almost daily contacts to Europe on 20 and 17 and occasionally on 30 and 40m. I have tried loading it (by tying inner and outer conductors of coax) and also a 28 ft wire with my tuner (against power outlet ground) on 80m and even stations across town can't hear me. If I had an antenna that worked on 80 I too would try it.
73, Charlie ke2sp

--- In AT_Sprint@yahoogroups.com, Karl Larsen <k5di@...> wrote:
>
> duolian99 wrote:
> > Excellent news, Steve. What (or how many?) band modules will it
> > come with?
> Just do the math. 80 40 30 20 17 and 15 = 6 band modules.
> > Adding 17m and 15m to the original four gives six bands -
> > however the eight time windows seems to imply seven bands?
> > Personally, I have no interest in 160m and 80m - they require
> > excessively large antennas out of keeping with the small size of
the
> > rig (ie rather like grafting an elephant trunk onto a mouse) and
I
> > wonder how many others really want/use these bands.(poll or
vote?)
> I use 80 Meters often and my modest portable antenna works
just
> great on 80 meters. So I am NOT in favor of deleting 80 Meters.
>
> >
> > If you were to have stayed with the 4 bnd format then my own
> > interest would have been for 40, 20, 17, 15m. Will you go with
the
> > 80mhz clock or something lower (to save on current drain). Is
it
> > possible to increase the tuning speed on this version? The high
> > bands will be nice for DX'ing - 17m is open almost every day to
> > Europe and 15m will be soon....
> > 73, Charlie ke2sp
> >
> >

> >
> Charlie I think your best idea is to buy the ATS3B and then
you can
> not use 80 meters :-)
>
> 72/73 Karl K5DI
>
> > --- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@> wrote:
> >
> >> I've decided to make only minimual changes to the -3A to
migrate
> >>
> > it to the
> >
> >> -3B. The primary change will be to add 17 and 15 meters as
> >>
> > standard.
> >
> >> Limiting it to 15 meters will keep the rig current reasonable.
The
> >>
> > current
> >
> >> starts to get pretty high if we push it to cover 10 meters.
> >>
> >> Adding two bands and keeping the rig so it automatically
detects
> >>
> > each band
> >
> >> module requires changing how the band modules are read by the
> >>
> > processor. To
> >
> >> do this, the processor reads a voltage from the band module,
> >>
> > created by a
> >
> >> voltage divider comprised of one of the 47K pull up resistors
and
> >>
> > a unique
> >
> >> resistor value on each band module. Rather than using the more
> >>
> > expensive
> >
> >> processor with A2D converter, I implemented a simple slope A/D
> >>
> > converter

> >
> >> with the comparator in the F1121A.
> >>
> >> It works by measuring the time it takes to charge a capacitor
to
> >>
> > 1/2 the
> >
> >> processor supply voltage, as generated by the internal voltage
> >>
> > reference.
> >
> >> The capacitor is then discharged back to 0 volts and then
measures
> >>
> > the time
> >
> >> it takes for the cap to charge up to the voltage generated by
the
> >>
> > band
> >
> >> module resistor divider, which is always less than 1/2 the
supply
> >>
> > voltage.
> >
> >> By dividing the intial capacitor charging time into 8 time
> >>
> > windows, we can
> >
> >> now compare the band module voltage charging time to find which
> >>
> > window it
> >
> >> falls into to determine the band module which created that
> >>
> > voltage.
> >
> >> After doing all this, I found the firmware now uses 4002 words
out
> >>
> > of a
> >
> >> possible 4096. Prety darn close to full!
> >>
> >> Some other minor hardware changes -
> >>
> >> QSK swich now controlled by the MUTE port only. This required
> >>

> > adding an
> >
> >> extra 2N7002 as an inverter. Series gate resistor and by pass
cap
> >>
> > added to
> >
> >> isolate it from the mute port. Found out this is the primary
path
> >>
> > for
> >
> >> excessive audio key clicks produced on the higher bands.
> >>
> >> Made the board mounting holes larger so swag shoulder spacers
can
> >>
> > be used,
> >
> >> like on the the QBSA board. This eliminates the nut and will
make
> >>
> > mounting
> >
> >> the board into a case easier.
> >>
> >> Connections to uP reset chip fixed.
> >> Fixed trimmer cap spacing on band modules.
> >>
> >> I'll probibly start collecting parts for this version soon.
Hope
> >>
> > to have
> >
> >> most of the parts on hand by the time I leave for my spring
hiking
> >>
> > trip in
> >
> >> mid April and be ready to start kitting when I get back, 4-6
weeks
> >>
> > later.
> >
> >> 72,
> >> Steve, KD1JV
> >> "Melt Solder"
> >> White Mountains of New Hampshire
> >> http://www.qsl.net/kd1jv/
> >> http://kd1jv.qrpradio.com

> >>
> >>
> >
> >
> >
> >
> >
> >
> > Yahoo! Groups Links
> >
> >
> >
> >
> >
> >
> >

1050. Re: ATS-3B progress

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-27 18:21:47 UTC
From: John L. Sielke
Topic: 905 Message: 1050

--- In AT_Sprint@yahoogroups.com, "duolian99" <ke2sp@...> wrote:
>
> Karl,
> It's good to hear that you use 80 meters with a 'modest portable
> antenna' and get good results. Perhaps you could explain or describe
> this antenna, because I would love to try it.

I don't know about Karl, but I have used 2 different Portable antennas on 80M. For a long contest, like Field Day, I use a 100' CF Zepp. I usually support the center with a 30' DK9SQ pole, and the ends as High as I can reach in nearby trees or bushes. I have worked across country with this on FD and 5W from a K2.

My "Quickie" portable antenna is a 66' wire, shot up over a tree with an "antenna launcher" (called a slingshot in some states). I use a 33' counterpoise laid on the ground if I can. If not, and I am near the car, I use the car body as a counterpoise. Works terrific 40M and up, and I have made contacts as far as GA with it on 80M.

John W2AGN

1051. Re: [AT_Sprint] Re: ATS-3B progress

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-27 20:01:23 UTC
From: Karl Larsen
Topic: 905 Message: 1051

Hi All, Here is what 80 Meters needs for serious DX chasing and just great signals every day of the year and without any Solar Effects problems. This antenna is what you want:

Length: 136 feet center fed.
Feedline: 450 ohm windowed twinlead.
Height: At least 70 feet above Ground (better than 1/2 Wavelength)

About 1956 there was an old Ham in Roswell, NM and he had a 80 meter antenna like the above. We were on AM Phone and when he came on the air with his DX100 at 100 Watts he sounded like the Voice of America. Never lower than 40 DB over S9. His antenna was between two 80 foot telephone poles.

As a general rule we don't have the space for this antenna nor the poles :-)

Today my 80 meter antenna at home is a dipole 100 feet long fed in the center with 450 ohm balanced cable. It is about 40 feet high at the center and then slopes down sharp to about 10 feet at the ends. This is not good, but it works ok.

My portable antenna is 85 feet long and I put it up as an inverted L. I have two counterpoise 30 and 35 feet long. Get the antenna as high as possible. A good friend uses the inverted L and his wire is longer but still not a half wave on 80 meters. He is beating me in the Fox Hunts on 80 meters.

72/73 Karl K5DI

John L. Sielke wrote:
> --- In AT_Sprint@yahoogroups.com, "duolian99" <ke2sp@...> wrote:
>
>> Karl,
>> It's good to hear that you use 80 meters with a 'modest portable
>> antenna' and get good results. Perhaps you could explain or describe
>> this antenna, because I would love to try it.
>>
>
> I don't know about Karl, but I have used 2 different Portable antennas
> on 80M. For a long contest, like Field Day, I use a 100' CF Zepp. I
> usually support the center with a 30' DK9SQ pole, and the ends as High
> as I can reach in nearby trees or bushes. I have worked across country
> with this on FD and 5W from a K2.
>
> My "Quickie" portable antenna is a 66' wire, shot up over a tree with
> an "antenna launcher" (called a slingshot in some states). I use a 33'

> counterpoise laid on the ground if I can. If not, and I am near the
> car, I use the car body as a counterpoise. Works terrific 40M and up,
> and I have made contacts as far as GA with it on 80M.
>
> John W2AGN
>
>
>
>
>
> Yahoo! Groups Links
>
>
>
>
>
>

1052. Re: Which antenna to use?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-27 20:26:45 UTC
From: Hank Greeb
Topic: 905 Message: 1052

Best antenna array I ever fielded for Field day was an inverted "V" dipole @ 50 feet in the center with the ends at about 15 feet for 80 metres, favoring north and south, and a W8JK wire beam cut for 40 and 20 metres at the same height favoring east and west. Both were fed with 450 ohm "windowed" twin lead. With a HW-9 I placed #2 or #3 three years running in Class 1B-1OP Battery (QRP) using these antennae. I don't exactly remember the gain of the 8JK beam, but vague recollection is something like 8 dBd, bi directional, favoring the east and west coast. The mast was home brew from lengths of irrigation tubing, 4", 3", and 2", rigged so I could put the array up single handedly. Note that the directions were chosen for SW Ohio, the choice of directions may vary with your location.

At times I could "hold and run" a frequency on 40 or 20 metres, even though the HW-9 was putting out only 4 watts to the power meter. I used a Johnson Matchbox for coupling between the rig and the antennae.

Of course, these daze my puny effort of 350 to 400 contacts in 24 hours would be considered mediocre, but it was fun. Folks have figured out how to get 500 or more contacts in 24 hours even with QRP....

For truly portable operation, I always carried 30' of TV mast with our camping gear, and ran a 80 metre dipole, rigged as two of three guys, fed with the same 450 ohm feedline, and used the same transmatch. I generally packed a 100 watt rig, most recently a Drake TR-7, but sometimes the HW-9. This setup allowed me to handle several TCC traffic from the east to the west part of the United States, generally on 20 metres.

The very "best" portable operation I had was during a 1970's Ohio QSO party, where we rented a cabin in a state park on top of some very small "mountains" in eastern Ohio, and there were ubiquitous 70' naturally growing antennae masts. The spacing was such that I could only put up a 40 metre halfwave, which I fed with 450 Ohm line. At 70' it did a credible job - folks on the Ohio SSB net were giving me signal reports better than I received from am 80 metre extended double zepp at 50' which I used at home.

Methinks investment in antennae is the first and best utilization of resources for a ham radio station. Second is receiver. A far third is transmitter power.

73 de n8xx Hg

Karl Larsen wrote:

> <>Hi All, Here is what 80 Meters needs for serious DX chasing and just
> great signals every day of the year and without any Solar Effects
> problems. This antenna is what you want:
>
> Length: 136 feet center fed.
> Feedline: 450 ohm windowed twinlead.
> Height: At least 70 feet above Ground (better than 1/2 Wavelength)
>
> About 1956 there was an old Ham in Roswell, NM and he had a 80 meter
> antenna like the above. We were on AM Phone and when he came on the
> air with his DX100 at 100 Watts he sounded like the Voice of America.
> Never lower than 40 DB over S9. His antenna was between two 80 foot
> telephone poles.
>
> As a general rule we don't have the space for this antenna nor the
> poles :-)
>
> Today my 80 meter antenna at home is a dipole 100 feet long fed in the
> center with 450 ohm balanced cable. It is about 40 feet high at the
> center and then slopes down sharp to about 10 feet at the ends. This
> is not good, but it works ok.
>
> My portable antenna is 85 feet long and I put it up as an inverted L.
> I have two counterpoise 30 and 35 feet long. Get the antenna as high
> as possible. A good friend uses the inverted L and his wire is longer
> but still not a half wave on 80 meters. He is beating me in the Fox
> Hunts on 80 meters.
>
> 72/73 Karl K5DI

1053. ATS3/ATS3A Keying Envelope Fix

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-28 08:44:56 UTC
From: jgaffke
Topic: 1053 Message: 1053

I may have a solution to the keying envelope issues that Carey Fuller, KX0R, describes in his document over in the files section.

A simple fix for the abrupt falling edges when operating above 10 volts is to put a 4.3v zener across R14. I didn't try this part of the fix by itself. This should solve most of the problem.

Here's a more complete fix that also stabilizes the rising edge of the envelope over supply voltage:

Replace the 2N7002 at Q3 with an MMBT3904.
Remove R13, replacing it with 0 ohms.
Insert a 10K resistor between the MMBT3904's emitter and ground.
Replace R14 with 100K, and put the 4.3 volt zener diode across it.
Add two 10K resistors in series from signal T/R to ground, and drive Q3's base from the midpoint.

That's it. Gave me consistent results with ~2ms rise and fall times across a supply range of five to twelve volts. You could probably skip those 10K's in the base node if never operating below about 6.5 volts (you will have to adjust the emitter resistor to 22K or so).

These mods are easier on the ATS3 than on the ATS3A, as the MMBT3904 and one of the 10K resistors at its base are already done for you. The MMBT3904 footprint maps nicely to that of the 2N7002, same SOT-23 orientation.

A good choice for the zener might be Digikey's MAZ80430MLCT-ND, 4.30 volts. It's in a package the same size as the 0805 at R14, so can stack right on top of it. For prototyping I used two small LEDs instead, each had a forward drop of 2.0 volts.

I put two 10K resistors standing up on end at the base and emitter pads of Q3, then installed the MMBT3904 on top of that, only the collector tab touches the board. (If you feel confident, you could cut traces instead.) Then solder another 10K to the ground node on the nearby caps, and run a wire from it to the MMBT3904 base.

Before the hack, I measured rise and fall times at 6 and 12 volts. Everything was well behaved at 6 volts, as Carey reports. But as the supply voltage rises, the gate of Q4 goes more quickly through the transition region (which is just below Vcc) on the rising edge of the signal, as that is the steep part of the exponential curve and it has much further to go. But the new resistor in the emitter leg makes Q3 a constant current source when on, regardless of the supply voltage. So the voltage at the gate of Q4 now falls in a linear fashion as it travels through the transition region in response to key down.

With higher supply voltages, the quesient 'on' voltage at the gate of Q4 becomes further removed from Vcc, and so has further to travel to turn Q4 back off. This delay in turning off Q4 becomes extreme at 12 volts, where Q4 hasn't even started to turn off when the DDS shuts down the square wave into U8. So at 12 volts, the falling edge of the envelope is pretty much instantaneous. The zener removes this delay by preventing Q4's gate from ever going beyond 4.3 volts below Vcc.

The values listed are just the first I tried, may be better choices. The zener voltage must be high enough to ensure Q4 turns fully on, but not so high that the delay starts to reappear. First trim R14 for the falling edge, then choose the emitter resistor at Q3 for the best rising edge of the envelope.

With the 10K dividers on Q3's base, the 'on' voltage there is 1.75v, so we see about 1.15 volts at the emitter. The current source operates at 1.15v/10K = 0.115 ma. With just over a volt at the collector of Q3, we have enough headroom to turn Q4 on at supply voltages down to 5 volts.

Just got this working an hour or so ago. Probably have more adjustments to make once this gets reviewed.

73's
Jerry Gaffke, KE7ER

1054. ZM-2 ATU ?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-28 14:15:29 UTC
From: chris reeves
Topic: 1054 Message: 1054

has anyone tried the ZM-2 ATU tuner and what did you think? I use an open wire non-resonant dipole?

1055. Re: [AT_Sprint] ZM-2 ATU ?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-02-28 14:42:34 UTC
From: John A. Evans - N0HJ
Topic: 1054 Message: 1055

The ZM-2 is a great tuner - I've used it quite a bit for doublets fed with twinlead and it is a solid performer. I did give it up, however, for backpacking purposes as an L tuner for end fed wires is a lot lighter (that darned toroid in the ZM-2 weighs a lot) and takes up less space in my backpack. For casual backpacking or field use, the ZM-2 is very hard to beat though.

72 - john - n0hj

chris reeves wrote:
>
> has anyone tried the ZM-2 ATU tuner and what did you think? I use an
> open wire non-resonant dipole?
>

1056. Re: ATS3/ATS3A Keying Envelope Fix

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-01 07:29:55 UTC
From: radio_kx0r
Topic: 1053 Message: 1056

Jerry,

I just re-read your clear explanation of your keying mod while looking at my schematic. The concept of the current source was what I missed when I tried to improve the keying. While my simple mod of changing R13 from 22K to 56K works OK for a 9-12V supply, it ruins the lower voltage range 6-9V. It sounds like you've found a much better answer.

Please post an update here once you've played with the values a bit more. It might save the rest of us some frustration and possibly even damage to our rigs. If you feel like you've got the values right, we'll follow.

Your explanation of how the original circuit works and why it fails at high V+ is excellent. I saw the same thing on my scope - at high supply C42 and C43 stay charged so long that the DDS drive signal is cut off before the keying circuit can decay and shape the signal. The resulting sharp "break" waveform is horrible and not what we want to sound like.

This is exactly what I hoped would happen when I posted the original observations - someone smarter would think about the problem and come up with a better answer. If this works out, perhaps Steve would consider including the mod in the new "B" - this seems to be almost cost neutral.

You've also confirmed that probably most of the unmodified ATS-3 and 3A rigs DO have this keying problem at higher supply voltages - it's not just some variation in parts or whatever.

Please confirm that Q4 is drawn incorrectly (source and drain reversed) on our schematics - this could prove confusing to others as they work through this mod.

Thanks for taking the time to solve this little puzzle. It would be nice if you could post a modified circuit - perhaps just a pdf or jpg of a sketch in the "FILES" area here - to help others. I followed your clear explanation just fine, but I spent some time studying this little circuit when I noticed the problem. If you post a drawing, it may well be the universal shaped-keying circuit for lots of similar rigs...might as well make it easy to copy.

This is a modulator, not a switch...

Carey Fuller
KX0R

>
> I may have a solution to the keying envelope issues that Carey
Fuller,
> KX0R, describes in his document over in the files section.
>
> A simple fix for the abrupt falling edges when operating above 10
> volts is to put a 4.3v zener across R14. I didn't try this part of
> the fix by itself. This should solve most of the problem.
>
>
> Here's a more complete fix that also stabilizes the rising edge of
the
> envelope over supply voltage:
>
> Replace the 2N7002 at Q3 with an MMBT3904.
> Remove R13, replacing it with 0 ohms.
> Insert a 10K resistor between the MMBT3904's emitter and ground.
> Replace R14 with 100K, and put the 4.3 volt zener diode across it.
> Add two 10K resistors in series from signal T/R to ground, and drive
> Q3's base from the midpoint.
>
>
>
> That's it. Gave me consistent results with ~2ms rise and fall times
> across a supply range of five to twelve volts. You could probably
> skip those 10K's in the base node if never operating below about 6.5
> volts (you will have to adjust the emitter resistor to 22K or so).
>
> These mods are easier on the ATS3 than on the ATS3A, as the MMBT3904
> and one of the 10K resistors at its base are already done for you.
> The MMBT3904 footprint maps nicely to that of the 2N7002, same SOT-
23
> orientation.
>
> A good choice for the zener might be Digikey's MAZ80430MLCT-ND, 4.30
> volts. It's in a package the same size as the 0805 at R14, so can
> stack right on top of it. For prototyping I used two small LEDs
> instead, each had a forward drop of 2.0 volts.
>
> I put two 10K resistors standing up on end at the base and emitter
> pads of Q3, then installed the MMBT3904 on top of that, only the
> collector tab touches the board. (If you feel confident, you could
> cut traces instead.) Then solder another 10K to the ground node on
> the nearby caps, and run a wire from it to the MMBT3904 base.
>
>
>
> Before the hack, I measured rise and fall times at 6 and 12 volts.
> Everything was well behaved at 6 volts, as Carey reports. But as
the

> supply voltage rises, the gate of Q4 goes more quickly through the
> transition region (which is just below Vcc) on the rising edge of
the
> signal, as that is the steep part of the exponential curve and it
has
> much further to go. But the new resistor in the emitter leg makes
Q3
> a constant current source when on, regardless of the supply
voltage.
> So the voltage at the gate of Q4 now falls in a linear fashion as it
> travels through the transition region in response to key down.
>
> With higher supply voltages, the quesient 'on' voltage at the gate
of
> Q4 becomes further removed from Vcc, and so has further to travel to
> turn Q4 back off. This delay in turning off Q4 becomes extreme at
12
> volts, where Q4 hasn't even started to turn off when the DDS shuts
> down the square wave into U8. So at 12 volts, the falling edge of
the
> envelope is pretty much instantaneous. The zener removes this delay
> by preventing Q4's gate from ever going beyond 4.3 volts below
Vcc.
>
> The values listed are just the first I tried, may be better
choices.
> The zener voltage must be high enough to ensure Q4 turns fully on,
but
> not so high that the delay starts to reappear. First trim R14 for
the
> falling edge, then choose the emitter resistor at Q3 for the best
> rising edge of the envelope.
>
> With the 10K dividers on Q3's base, the 'on' voltage there is 1.75v,
> so we see about 1.15 volts at the emitter. The current source
> operates at 1.15v/10K = 0.115 ma. With just over a volt at the
> collector of Q3, we have enough headroom to turn Q4 on at supply
> voltages down to 5 volts.
>
>
> Just got this working an hour or so ago. Probably have more
> adjustments to make once this gets reviewed.
>
> 73's
> Jerry Gaffke, KE7ER
>

1057. Re: ATS3/ATS3A Keying Envelope Fix

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-01 17:22:34 UTC
From: jgaffke
Topic: 1053 Message: 1057

Hi Carey,

Thanks for the comments. I'll try to get a schematic and additional notes up in the files section this weekend.

Most people will probably want to stick with just the zener fix. It is simple to do and takes care of that abrupt falling edge. The relatively difficult hacks for turning Q3 into a constant current source give less in return.

I'm a bit worried about 100 orders getting fired off to Digikey for that zener, only to find it's not quite the right part.
On page 3 of the NDT2955 datasheet
http://www.fairchildsemi.com/ds/ND/NDT2955.pdf
figure 4 shows that -4 volts of Vgs is "typically" towards the wrong side of the knee. The nominally 4.3v zener can range from 4.0 to 4.6. So at 4.7 volts, the MAZ80470MLCT-ND might be a better choice, will try to make a solid recommendation when I put up the schematics after double checking the resultant delays we get. At six volts, the stock ATS3A will have a Vgs of around -4.1 volts,
this rises proportionally to the supply voltage.

Those with stocks of surface mount parts, xacto knives, a binocular microscope, oscilloscope, multiple soldering irons, no coffee, and a really anal disposition might consider the rest of the mods. If you have no way of inspecting the resulting envelope, perhaps best left undone. I was reasonably happy with what I got, but thats a matter of taste. In particular, not clear at what point a linear ramp on the rising edge "matches" an exponential falling edge. Edges are still a bit fast, could slow them by adding capacitance or scaling both resistors.

In my previous posting:
>>You could probably skip those 10K's in the base node if never
>>operating below about 6.5 volts (you will have to adjust the
>>emitter resistor to 22K or so).

Make that at least 7 volts. 6.5 volts only gives a Vgs of about -3.5, and Q4 will not be fully on. Vgs ~= Vcc = (Vb - 0.6 + 0.1), where Q3's Vb is now 3.5 volts directly from the MSP430's upper rail.

And from last week, when I wrote:
>Re: ATS-3B progress
>Consider adding series resistors on the two keyer lines so the
>MSP430's ESD protection diodes have a fighting chance.

No reason to panic here. Those .01uF caps might help a bit on static discharge from a finger, and a series 100 to 1K resistor might not.

Body capacitance is quite low, and skin resistance high. But if I were to start jacking other equipment into the keyer port beyond a paddle, I would consider series resistors as a measure of extra protection.

73's
Jerry Gaffke, KE7ER

1058. Re: ATS3/ATS3A Keying Envelope Fix

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-01 17:51:37 UTC
From: jgaffke
Topic: 1053 Message: 1058

--- In AT_Sprint@yahoogroups.com, "jgaffke" <jgaffke@...> wrote:
>Vgs ~= Vcc = (Vb - 0.6 + 0.1)
Vgs ~= Vcc - (Vb - 0.6 + 0.1)

>... and a really anal disposition ...
Thats me.

Jerry Gaffke, KE7ER

1059. Re: [AT_Sprint] ZM-2 ATU ?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-01 20:21:27 UTC
From: gerald mackie
Topic: 1054 Message: 1059

I've been getting emails about the AT_3 qrp rig. Where can I get more info? I would like to build one . Thanks for your help. Jerry WB1A

"John A. Evans - N0HJ" <jaevans@...> wrote: The ZM-2 is a great tuner - I've used it quite a bit for doublets fed with twinlead and it is a solid performer. I did give it up, however, for backpacking purposes as an L tuner for end fed wires is a lot lighter (that darned toroid in the ZM-2 weighs a lot) and takes up less space in my backpack. For casual backpacking or field use, the ZM-2 is very hard to beat though.

72 - john - n0hj

chris reeves wrote: has anyone tried the ZM-2 ATU tuner and what did you think? I use an open wire non-resonant dipole?

1060. Re: [AT_Sprint] ZM-2 ATU ?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-01 21:40:10 UTC
From: Michael Harnage
Topic: 1054 Message: 1060

Hi Jerry,

None in production at this time. Keep your eyes and
ears open for used ones that pop up from time to time.
Also, sometime after April Steve/kd1jv will be kitting
a 6 band version (the ATS-3B). Watch his website and
listen on this group for the announcement.

While you are waiting feel free to read the archives
of this group. Lot's of good information tucked away
there. Be sure to check out photos of rigs that users
have built. Lot's of fine builders and operators are
on this list.

-mike/w1mt

--- gerald mackie <wb1aradio@...> wrote:

> I've been getting emails about the AT_3 qrp rig.
> Where can I get more info? I would like to build one
> . Thanks for your help. Jerry WB1A
>

Yahoo! Music Unlimited
Access over 1 million songs.
http://music.yahoo.com/unlimited

1061. Re: ATS3/ATS3A Keying Envelope Fix

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-01 22:57:05 UTC
From: jgaffke
Topic: 1053 Message: 1061

--- In AT_Sprint@yahoogroups.com, "jgaffke" <jgaffke@...> wrote:
> Most people will probably want to stick with just the zener fix

In addition to a 4.7v zener across R14, perhaps increase R13 to
something like Carey's 56K. Both very easy mods to current rigs.

The zener stablizes fall times across variations in supply
voltage, the envelope fall time is determined by R14.
Envelope rise times will be much longer due to the change at R13,
shoot for 6 or 7 ms at 6v so it is still reasonably slow at 12v.
Will try it this weekend.

As far as new designs, either way is fine by me. The 'current source'
approach is nice, but that's two more 0805's to have cold solder
joints on. Perhaps at least route the board such that the trace
to Q3's gate can be cut.

Jerry Gaffke, KE7ER

1062. Re: ATS3/ATS3A Keying Envelope Fix

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-01 23:42:47 UTC
From: jgaffke
Topic: 1053 Message: 1062

Scratch that. Would still have the same problem Carey had down at 6v.
Jerry Gaffke, KE7ER

--- In AT_Sprint@yahoogroups.com, "jgaffke" <jgaffke@...> wrote:
> In addition to a 4.7v zener across R14, perhaps increase R13 to
> something like Carey's 56K. Both very easy mods to current rigs.

1063. Lutz's Murata Filter Mod

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-02 00:52:00 UTC
From: JT Croteau
Topic: 1063 Message: 1063

Has anyone actually performed Lutz's Front End Filter Mod using the Murata 7.02 filter? I've seen a couple posts from Lutz where he recommends against doing it. I took part on the group buy of these filters and have three of them in my box, wondering what I should be doing with them now.

The only mod presently applied to my ATS-3 is the NR4E filter mod.

--
JT Croteau, N1ESE - Manchester, NH
http://n1ese.qrpradio.com

1064. Re: [AT_Sprint] Lutz's Murata Filter Mod

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-02 01:34:04 UTC
From: Karl Larsen
Topic: 1063 Message: 1064

JT these filters are needed in Europe where most of the 40 Meter
broadcast interference comes from. But here in the USA there is no need
for that Front End Mode.

73 Karl K5DI

JT Croteau wrote:
> Has anyone actually performed Lutz's Front End Filter Mod using the
> Murata 7.02 filter? I've seen a couple posts from Lutz where he
> recommends against doing it. I took part on the group buy of these
> filters and have three of them in my box, wondering what I should be
> doing with them now.
>
> The only mod presently applied to my ATS-3 is the NR4E filter mod.
>
>

1065. Re: [AT_Sprint] Lutz's Murata Filter Mod

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-02 14:09:56 UTC
From: Jim Miller
Topic: 1063 Message: 1065

JT

I've used my ATS3 on my 88ft dipole here in MD where I am pounded by SWBC originating in NC and TN. The QSK diodes go into conduction and I get interference in the 40M band as a result. I think the better course of action is doing the QSK mod which substitutes switches for the QSK diodes.

I'm going to build up the ATS3B this summer and probably let my ATS3 go for sale otherwise I would be doing the QSK mod.

73

jim ab3cv

1066. Re: [AT_Sprint] Lutz's Murata Filter Mod

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-02 16:04:44 UTC
From: Lutz Bergner
Topic: 1063 Message: 1066

Hi all,

Just uploaded 2 PDF files to the files section with plots of my 40m LC filter response and the response of the murata ceramic filter. Please subtract 21db from insertion loss. I used a L shaped resistive matching network for the 1.5kOhm side of the RX filter (pin 1).
When you look at these files , you will easely see why I am discouraging the ceramic filter.
Just finished my AD9951 based scalar network analyzer and hence was able to supply these plots.

72s

Lutz

Am Donnerstag, den 01.03.2007, 19:52 -0500 schrieb JT Croteau:
> Has anyone actually performed Lutz's Front End Filter Mod using the
> Murata 7.02 filter? I've seen a couple posts from Lutz where he
> recommends against doing it. I took part on the group buy of these
> filters and have three of them in my box, wondering what I should be
> doing with them now.
>
> The only mod presently applied to my ATS-3 is the NR4E filter mod.
>
> --
> JT Croteau, N1ESE - Manchester, NH

1067. Re: [AT_Sprint] Lutz's Murata Filter Mod

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-02 21:00:20 UTC
From: gerald mackie
Topic: 1063 Message: 1067

Ive been getting emails regarding an ATS3 qrp rig which I never heard of. How can I get more info and purchase a kit? Thanks for your help. WB1a Jerry

Jim Miller <jim@...> wrote: JT

I've used my ATS3 on my 88ft dipole here in MD where I am pounded by SWBC originating in NC and TN. The QSK diodes go into conduction and I get interference in the 40M band as a result. I think the better course of action is doing the QSK mod which substitutes switches for the QSK diodes.

I'm going to build up the ATS3B this summer and probably let my ATS3 go for sale otherwise I would be doing the QSK mod.

73

jim ab3cv

Yahoo! Groups Links

1068. Re: [AT_Sprint] Lutz's Murata Filter Mod

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-02 23:12:03 UTC
From: Richard Bennett
Topic: 1063 Message: 1068

Jerry,

If I understand your question, you are in the right place to learn more about the AT Sprint radio. You might want to look at some of the Photos and read some of the Files on the Yahoo Page to get a feel for the rig.

Steve does not have any kits available right now, but we are hearing he is working on the next version, the ATS-3B. Stay tuned here on this reflector to find out more.

de kc0pet, Rick

----- Original Message -----
From: gerald mackie
To: AT_Sprint@yahoogroups.com
Sent: 03/02/2007 4:05:37 PM
Subject: Re: [AT_Sprint] Lutz's Murata Filter Mod

Ive been getting emails regarding an ATS3 qrp rig which I never heard of. How can I get more info and purchase a kit? Thanks for your help. WB1a Jerry

Jim Miller <jim@...> wrote:
JT

I've used my ATS3 on my 88ft dipole here in MD where I am pounded by SWBC originating in NC and TN. The QSK diodes go into conduction and I get interference in the 40M band as a result. I think the better course of action is doing the QSK mod which substitutes switches for the QSK diodes.

I'm going to build up the ATS3B this summer and probably let my ATS3 go for sale otherwise I would be doing the QSK mod.

73

jim ab3cv

Yahoo! Groups Links

1069. Re: [AT_Sprint] Lutz's Murata Filter Mod

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-02 22:13:00 UTC
From: Kurt
Topic: 1063 Message: 1069

gerald mackie wrote:
> Ive been getting emails regarding an ATS3 qrp rig which I never heard
> of. How can I get more info and purchase a kit? Thanks for your help.
> WB1a Jerry
>
> */Jim Miller <jim@...>/* wrote:
>
> JT
>
> I've used my ATS3 on my 88ft dipole here in MD where I am pounded by
> SWBC
> originating in NC and TN. The QSK diodes go into conduction and I get
> interference in the 40M band as a result. I think the better course of
> action is doing the QSK mod which substitutes switches for the QSK
> diodes.
>
> I'm going to build up the ATS3B this summer and probably let my ATS3
> go for
> sale otherwise I would be doing the QSK mod.
>
> 73
>
> jim ab3cv

Lemme guess,

The SWBC is a high powered religious broadcast? :-)

Kurt

1070. Winding LF3s for filter board question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-04 18:19:05 UTC
From: Pete Meier
Topic: 1063 Message: 1070

Are Steve's directions for winding LF3 on the filter board just a different way (maybe easier way) of adding a secondary winding which he calls a "link"?

Pete WK8S

1071. ATS3A 20 meters

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-04 23:23:52 UTC
From: Pete Meier
Topic: 1071 Message: 1071

I just finished the ATS3A main board. It fired up first time and all checked out OK. Love that feeling!

I built the 20 meter filter board and it too worked but not as I expected. I am only seeing about 2.5 watts at 12 volts.
The caps are correct and I have the correct turn count on the coils. Spreading the turns doesn't change anything much.

Any suggestions?

Pete WK8S

1072. RE: [AT_Sprint] ATS3A 20 meters

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-05 00:59:08 UTC
From: Rob May
Topic: 1071 Message: 1072

Pete,
Just a shot in the dark here, you did use the yellow toroids right? Check the output of the PA with an RF probe on pin 5 of the filter board and see if you have full power there (or jumper pin 5 to the antenna terminal and check with a watt meter). That will tell you if it is a filter problem or something in the RF chain.
Rob
NV5E

>From: Pete Meier <pmeier@...>
>Reply-To: AT_Sprint@yahoogroups.com
>To: AT_Sprint@yahoogroups.com
>Subject: [AT_Sprint] ATS3A 20 meters
>Date: Sun, 4 Mar 2007 18:23:52 -0500
>
>I just finished the ATS3A main board. It fired up first time and all
>checked out OK. Love that feeling!
>
>I built the 20 meter filter board and it too worked but not as I
>expected. I am only seeing about 2.5 watts at 12 volts.
>The caps are correct and I have the correct turn count on the coils.
>Spreading the turns doesn't change anything much.
>
>Any suggestions?
>
>Pete WK8S

With tax season right around the corner, make sure to follow these few simple tips.
http://articles.moneycentral.msn.com/Taxes/PreparationTips/PreparationTips.aspx?icid=HMFeb tagline

1073. L4940-12 in Altoids Smalls Tin

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-05 05:09:04 UTC
From: DOUG PHILLIPS
Topic: 1073 Message: 1073

Guys,

While my project doesn't have the technical elegance of some of the work that gets posted here, it is something I have done. I found a good use for the Altoids Smalls tin, it holds the L4940-12 nicely and acts as a heat sink for the regulator. I use Anderson Powerpoles for all my 12VDC distribution so I used a pig tail for the input with Powerpoles connectors and a pigtail with the coaxial power connector for the ATS-3 on the other end. I used epoxy to hold the conductors in place in the tin, a jpg is in the photos under W7RDP.

73, Doug W7RDP

1074. Re: [AT_Sprint] L4940-12 in Altoids Smalls Tin

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-05 17:14:27 UTC
From: Lee Mairs (SAG)
Topic: 1073 Message: 1074

Great idea! I think I will add either one of those re-settable solid state breakers or an auto fuse in mine. I will make one up to use on my 2N2-40 and my SWL transceivers also.
73 de Lee
KM4YY/8

DOUG PHILLIPS wrote:
>
> Guys,
>
> While my project doesn't have the technical elegance of some of the work
> that gets posted here, it is something I have done. I found a good use
> for
> the Altoids Smalls tin, it holds the L4940-12 nicely and acts as a
> heat sink
> for the regulator. I use Anderson Powerpoles for all my 12VDC
> distribution
> so I used a pig tail for the input with Powerpoles connectors and a
> pigtail
> with the coaxial power connector for the ATS-3 on the other end. I used
> epoxy to hold the conductors in place in the tin, a jpg is in the photos
> under W7RDP.
>
> 73, Doug W7RDP
>
>

1075. RE: [AT_Sprint] L4940-12 in Altoids Smalls Tin

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-06 01:25:31 UTC
From: Richard Bennett
Topic: 1073 Message: 1075

Looks great to me.

I have the parts laying around to make a QRP dummy load in an Altoids gum tin, just haven't gotten it done. Of course I am a fan of tins for these type of things. Think of all of the money we are saving on those expensive metal enclosures. And we always have nice breath to show for it.

de kc0pet, Rick

----- Original Message -----
From: DOUG PHILLIPS
To: AT_Sprint@yahoogroups.com
Sent: 03/04/2007 11:14:38 PM
Subject: [AT_Sprint] L4940-12 in Altoids Smalls Tin

Guys,

While my project doesn't have the technical elegance of some of the work that gets posted here, it is something I have done. I found a good use for the Altoids Smalls tin, it holds the L4940-12 nicely and acts as a heat sink for the regulator. I use Anderson Powerpoles for all my 12VDC distribution so I used a pig tail for the input with Powerpoles connectors and a pigtail with the coaxial power connector for the ATS-3 on the other end. I used epoxy to hold the conductors in place in the tin, a jpg is in the photos under W7RDP.

73, Doug W7RDP

1076. Re: L4940-12 in Altoids Smalls Tin

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-06 20:47:36 UTC
From: jgaffke
Topic: 1073 Message: 1076

Datasheet says the L4940-12 can survive a reverse Vin of up to -15
volts: www.st.com/stonline/products/literature/ds/2141.pdf
The SS12 Schottky at D1 can survive -20 volts.
http://www.fairchildsemi.com/ds/SS/SS12.pdf

Typical dropout voltage at 0.5 A is 200mv on the L4940-12.
The SS12 is more like 400mv.

Height above board is 4.6mm max in both the D2PAK and TO220 packages,
same as the height of the aluminum standoffs between the ATS3A
and the front panel. Top of part is plastic, won't short.

So might solder the tab and center pin of the L4940-12 to the
back of the ATS3A PC board in that large region of copper near
the crystal filter, replacing the SS12 Schottky reverse protection
diode. Lift up the Vin and Vout pins, add the 0.1uF and 22uF
bypass caps from the datasheet between the pin and the groundplane,
add wires to where D1 was. The copper serves as a heat sink.
These linear regulators can be unstable if the caps are left off.

I suppose that extra heat could cause trouble.
But the L4940-12 shouldn't get very warm unless you are
feeding the rig more than 12v.

73's
Jerry Gaffke, KE7ER

--- In AT_Sprint@yahoogroups.com, "Richard Bennett" <kc0pet@...> wrote:
>
> Looks great to me.
>
> I have the parts laying around to make a QRP dummy load in an
Altoids gum tin, just haven't gotten it done. Of course I am a fan of
tins for these type of things. Think of all of the money we are
saving on those expensive metal enclosures. And we always have nice
breath to show for it.
>
> de kc0pet, Rick
>
>
> ----- Original Message -----
> From: DOUG PHILLIPS
> To: AT_Sprint@yahoogroups.com
> Sent: 03/04/2007 11:14:38 PM
> Subject: [AT_Sprint] L4940-12 in Altoids Smalls Tin
>

>
> Guys,
>
> While my project doesn't have the technical elegance of some of the
work
> that gets posted here, it is something I have done. I found a good
use for
> the Altoids Smalls tin, it holds the L4940-12 nicely and acts as a
heat sink
> for the regulator. I use Anderson Powerpoles for all my 12VDC
distribution
> so I used a pig tail for the input with Powerpoles connectors and a
pigtail
> with the coaxial power connector for the ATS-3 on the other end. I used
> epoxy to hold the conductors in place in the tin, a jpg is in the
photos
> under W7RDP.
>
> 73, Doug W7RDP
>

1077. Re: ATS3/ATS3A Keying Envelope Fix

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-08 04:15:11 UTC
From: jgaffke
Topic: 1053 Message: 1077

I've learned a few things regarding that key click filter.
My initial screed still stands, with a few minor adjustments.

>Most people will probably want to stick with just the zener fix.

Still true. Try a 5.1 or 5.6v zener spec'ed for 5ma (the 50ma guys leak way too much) across R14. If the key down voltage between Q4's gate and V+ is between 4.5 and 5.5 volts, that will avoid the DDS turnoff issue that we see with V+ above 10v. At 100 uA, the voltage is well below the zener's nominal voltage.

C42 and C43 should go from V+ to Q4's gate, not from Gnd, since Vgs at Q4 is measured from V+ to the gate. When tied to Gnd, the envelope transitions are mangled by any fluctuations in V+, resulting in slower envelope rising edges and faster envelope falling edges.

When making Q3 a current source, it's easy enough to get something to work, not clear what will work across all part variations. It's a balancing act between reasonably slow envelope transitions on the one hand and pretty much everything else on the other.

Transition region for my NDT2955 occurs with a Vgs of between -3 and -3.5 volts. Given how far Vgs swings with key up and key down, envelope rise and fall times have to be kept fairly sharp or delays get out of hand. The DDS chip shuts down U8 about 7.75ms after key up.

Drop across an LED is typically more like 1.7 volts than the 2.0 volts reported earlier, when operating at ~100 uA. I'm now using three LED's (was 2) to avoid Q4's transition region. Diodes that zener at voltages below 5 volts have curves like a resistor.

Best results so far are with a 68K resistor at R14, 0 ohms at R13, an MMBT3904 at Q3 with a 12K emitter resistor to Gnd, two 0.1uF caps from Q4's gate to V+, and two 10K resistors in series from signal T/R to Gnd with center point driving the base of Q3. I'm using LED's across R14, datasheet curves favor the 5.1 or 5.6v MAZ80510MLCT-ND. I see envelope rise/fall times of ~1.75 ms across V+ = 5 to 12v.

May be best to scale up the current and uF's at C42,C43 by 5x. We're only talking one mA or so, and only with key down.

It may be possible to use the 2N7002 of the ATS3a as a current source with no resistor divider on the gate, if the source resistor to ground is checked (and possibly trimmed) for correct key down voltage (and thus current). Makes the ATS3a an easy mod.

I saw a Vgs of around 1.6v when operating the 2n7002 at ~200 uA.

Still poking at this occasionally when I have time.
Will post to the files section when I have more complete results.

73's
Jerry Gaffke, KE7ER

1078. Re: [AT_Sprint] Re: ATS3/ATS3A Keying Envelope Fix

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-08 17:14:28 UTC
From: Joe Rocci
Topic: 1053 Message: 1078

I implemented very nice envelope control in another homebrew transmitter with a similar FET switch simply by connecting a capacitor between drain and gate of the power FET, and adjusting the drive resistors to get the desired rise-fall time. The capacitive feedback, working against the drive resistor, turns the switch into a very nice integrator with very linear & symmetrical rise and fall ramps.

Joe
W3JDR

----- Original Message -----
From: jgaffke
To: AT_Sprint@yahoogroups.com
Sent: Wednesday, March 07, 2007 11:15 PM
Subject: [AT_Sprint] Re: ATS3/ATS3A Keying Envelope Fix

I've learned a few things regarding that key click filter.
My initial screed still stands, with a few minor adjustments.

>Most people will probably want to stick with just the zener fix.

Still true. Try a 5.1 or 5.6v zener spec'ed for 5ma (the 50ma guys leak way too much) across R14. If the key down voltage between Q4's gate and V+ is between 4.5 and 5.5 volts, that will avoid the DDS turnoff issue that we see with V+ above 10v. At 100 uA, the voltage is well below the zener's nominal voltage.

C42 and C43 should go from V+ to Q4's gate, not from Gnd, since Vgs at Q4 is measured from V+ to the gate. When tied to Gnd, the envelope transitions are mangled by any fluctuations in V+, resulting in slower envelope rising edges and faster envelope falling edges.

When making Q3 a current source, it's easy enough to get something to work, not clear what will work across all part variations. It's a balancing act between reasonably slow envelope transitions on the one hand and pretty much everything else on the other.

Transition region for my NDT2955 occurs with a Vgs of between -3 and -3.5 volts. Given how far Vgs swings with key up and key down, envelope rise and fall times have to be kept fairly sharp or delays get out of hand. The DDS chip shuts down U8 about 7.75ms after key up.

Drop across an LED is typically more like 1.7 volts than the 2.0 volts reported earlier, when operating at ~100 uA. I'm now using three LED's (was 2) to avoid Q4's transition region. Diodes that zener at voltages below 5 volts have curves like a resistor.

Best results so far are with a 68K resistor at R14, 0 ohms at R13,
an MMBT3904 at Q3 with a 12K emitter resistor to Gnd, two 0.1uF caps
from Q4's gate to V+, and two 10K resistors in series from signal
T/R to Gnd with center point driving the base of Q3. I'm using LED's
across R14, datasheet curves favor the 5.1 or 5.6v MAZ80510MLCT-ND.
I see envelope rise/fall times of ~1.75 ms across V+ = 5 to 12v.

May be best to scale up the current and uF's at C42,C43 by 5x.
We're only talking one mA or so, and only with key down.

It may be possible to use the 2N7002 of the ATS3a as a current
source with no resistor divider on the gate, if the source resistor
to ground is checked (and possibly trimmed) for correct key down
voltage (and thus current). Makes the ATS3a an easy mod.
I saw a Vgs of around 1.6v when operating the 2n7002 at ~200 uA.

Still poking at this occasionally when I have time.
Will post to the files section when I have more complete results.

73's
Jerry Gaffke, KE7ER

1079. Olimex MSP430-JTAG - bad design

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-08 19:22:49 UTC
From: Vojtěch Bubník
Topic: 1079 Message: 1079

Hi gang.

I built a copy of the Olimex MSP430-JTAG programming interface to program my ATS-3A.
http://www.olimex.com/dev/pdf/msp430-jtag-d.pdf

I am not a hardware guy, so I rather checked everything ten times before frying the MSP430 controller in the transceiver. I was surprised that in some cases the output on some pins was as high as 3.8V although everything is supposed to be sourced from a 3.3V stabilizer. The 3.8V are just on the boundary of the absolute maximum ratings of the MSP430 microcontroller, which is Vcc + 0.3V. The absolute maximum ratings would be exceeded if programming ATS-3, which controller is powered by 3.3V.

The problem is that the pullup resistors R16 and R17 are pulling up not just the two particular parallel port pins, but also Vdd. I am not sure whether the two pullups are needed. It seems that some parallel ports in some mode need them, but my does not. The fix is either to connect the R16 and R17 to input of the stabilizer instead of Vdd, or to let them disconnected.

Safe programming and VY 73,
Vojtech OK1IAK

1080. Re: ATS3/ATS3A Keying Envelope Fix

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-08 19:39:19 UTC
From: jgaffke
Topic: 1053 Message: 1080

Hi Joe,

That's a great idea!
Your approach allows us to slew the gate at Q4 quickly
to avoid those delays, the feedback cap slows things down
only when going through Q4's transition region.

JerryG

--- In AT_Sprint@yahoogroups.com, "Joe Rocci" <joe@...> wrote:
>
> I implemented very nice envelope control in another homebrew
transmitter with a similar FET switch simply by connecting a capacitor
between drain and gate of the power FET, and adjusting the drive
resistors to get the desired rise-fall time. The capacitive feedback,
working against the drive resistor, turns the switch into a very nice
integrator with very linear & symmetrical rise and fall ramps.
>
> Joe
> W3JDR

1081. Re: [AT_Sprint] Re: ATS3/ATS3A Keying Envelope Fix

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-08 19:59:30 UTC
From: Joe Rocci
Topic: 1053 Message: 1081

Jerry,

I put a photo of the waveshaped RF envelope in the Files section in the W3JDR folder, in a sub-folder named Photos. If you want the schematic & component values, I'll post them too.

----- Original Message -----
From: jgaffke
To: AT_Sprint@yahoogroups.com
Sent: Thursday, March 08, 2007 2:39 PM
Subject: [AT_Sprint] Re: ATS3/ATS3A Keying Envelope Fix

Hi Joe,

That's a great idea!
Your approach allows us to slew the gate at Q4 quickly
to avoid those delays, the feedback cap slows things down
only when going through Q4's transition region.

JerryG

--- In AT_Sprint@yahoogroups.com, "Joe Rocci" <joe@...> wrote:
>
> I implemented very nice envelope control in another homebrew transmitter with a similar FET switch simply by connecting a capacitor between drain and gate of the power FET, and adjusting the drive resistors to get the desired rise-fall time. The capacitive feedback, working against the drive resistor, turns the switch into a very nice integrator with very linear & symmetrical rise and fall ramps.
>
> Joe
> W3JDR

1082. Re: [AT_Sprint] Re: ATS3/ATS3A Keying Envelope Fix

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-08 20:02:49 UTC
From: Joe Rocci
Topic: 1053 Message: 1082

I just posted the schematic in the same folder

Joe

----- Original Message -----
From: jgaffke
To: AT_Sprint@yahoogroups.com
Sent: Thursday, March 08, 2007 2:39 PM
Subject: [AT_Sprint] Re: ATS3/ATS3A Keying Envelope Fix

Hi Joe,

That's a great idea!
Your approach allows us to slew the gate at Q4 quickly
to avoid those delays, the feedback cap slows things down
only when going through Q4's transition region.

JerryG

--- In AT_Sprint@yahoogroups.com, "Joe Rocci" <joe@...> wrote:
>
> I implemented very nice envelope control in another homebrew
transmitter with a similar FET switch simply by connecting a capacitor
between drain and gate of the power FET, and adjusting the drive
resistors to get the desired rise-fall time. The capacitive feedback,
working against the drive resistor, turns the switch into a very nice
integrator with very linear & symmetrical rise and fall ramps.
>
> Joe
> W3JDR

1083. Re: [AT_Sprint] Re: ATS3/ATS3A Keying Envelope Fix

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-08 20:08:21 UTC
From: Michael Harnage
Topic: 1053 Message: 1083

Yes please.

-mike/w1mt

--- Joe Rocci <joe@...> wrote:

If you want the schematic & component
> values, I'll post them too.

It's here! Your new message!
Get new email alerts with the free Yahoo! Toolbar.
http://tools.search.yahoo.com/toolbar/features/mail/

1084. Re: [AT_Sprint] Re: ATS3/ATS3A Keying Envelope Fix

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-08 20:06:35 UTC
From: Joe Rocci
Topic: 1053 Message: 1084

Ooops! Forgot to say that C2 (feedback cap) in the circuit is 0.1uf

Joe

----- Original Message -----
From: Joe Rocci
To: AT_Sprint@yahoogroups.com
Sent: Thursday, March 08, 2007 3:02 PM
Subject: Re: [AT_Sprint] Re: ATS3/ATS3A Keying Envelope Fix

I just posted the schematic in the same folder

Joe

----- Original Message -----
From: jgaffke
To: AT_Sprint@yahoogroups.com
Sent: Thursday, March 08, 2007 2:39 PM
Subject: [AT_Sprint] Re: ATS3/ATS3A Keying Envelope Fix

Hi Joe,

That's a great idea!
Your approach allows us to slew the gate at Q4 quickly
to avoid those delays, the feedback cap slows things down
only when going through Q4's transition region.

JerryG

--- In AT_Sprint@yahoogroups.com, "Joe Rocci" <joe@...> wrote:
>
> I implemented very nice envelope control in another homebrew
transmitter with a similar FET switch simply by connecting a capacitor
between drain and gate of the power FET, and adjusting the drive
resistors to get the desired rise-fall time. The capacitive feedback,
working against the drive resistor, turns the switch into a very nice
integrator with very linear & symmetrical rise and fall ramps.
>
> Joe
> W3JDR

1085. Re: Olimex MSP430-JTAG - bad design

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-09 02:44:21 UTC
From: Dave
Topic: 1079 Message: 1085

> The problem is that the pullup resistors R16 and R17 are pulling up
> not just the two particular parallel port pins, but also Vdd.

I can't imagine that R16 and R17 (33K each) combined are sourcing anywhere close to the maximum current that U1 is able to sink. If U1 is working properly it should easily be able to maintain VDD equal to the reference voltage on PIN4.

Dave, WA3OFF

1086. Re: ATS3/ATS3A Keying Envelope Fix

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-09 03:55:32 UTC
From: jgaffke
Topic: 1053 Message: 1086

Forget all that talk of zeners and current sources.
Joe Rocci's fix works, is easy to do, and the results look great.
It looks like it is also less sensitive to device characteristics.
Same mods should work fine on the ATS3.

I restored my ATS3a back to its original state, then:
Removed the two 0.1uF caps at C42, C43 (C53, C54 on ATS3)
Added two 0.01uF caps from drain to gate at Q4 (Q5 on ATS3)
Added a 100k resistor across C45 (C56 on ATS3)

The new parts can be 0805's.
Removing the old caps is easily done using two soldering irons.
I added the 0.01uF caps right on top of Q4's leads, the drain is the
middle pin and the gate is that top outside pin connected to R13.
The 100K resistor across C45 is non-critical, could be 10K to 1Meg,
and is there to keep Q4 leakage from charging up C45 when Q4 is off.

The result with 12 volts is a beautiful trapezoidal RF envelope
with a 0.9 ms rise time and 4.0 ms fall time. At 6 volts, we get a
slightly rounded 4.0 ms rise time and a straight 2.0 ms fall time.
This is much better than it was, at 12 volts we used to have
a 0.5 ms rise time and a very abrupt fall.

Let us know if anyone sees a way to improve on this, especially
that 0.9 ms rise time at 12 volts. Keep in mind that with key up
and a 6 volt supply, Q4's Vgs must be at least -4 volts. After a
week or so, perhaps Carey could prepend this posting plus any
amendments to his keying document in the group's files section.

73's
Jerry Gaffke, KE7ER

--- In AT_Sprint@yahoogroups.com, "Jerry Gaffke" wrote:
> Hi Joe,
> That's a great idea!
> Your approach allows us to slew the gate at Q4 quickly
> to avoid those delays, the feedback cap slows things down
> only when going through Q4's transition region.
> JerryG
>
>--- In AT_Sprint@yahoogroups.com, "Joe Rocci" <joe@> wrote:
>> I implemented very nice envelope control in another homebrew
>> transmitter with a similar FET switch simply by connecting a
>> capacitor between drain and gate of the power FET, and adjusting
>> the drive resistors to get the desired rise-fall time. The
>> capacitive feedback, working against the drive resistor, turns

>> the switch into a very nice integrator with very linear &
>> symmetrical rise and fall ramps.
>> Joe W3JDR

1087. Re: [AT_Sprint] Re: ATS3/ATS3A Keying Envelope Fix

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-09 11:02:54 UTC
From: Joe Rocci
Topic: 1053 Message: 1087

Jerry,

If you massage the resistor ratios (drive resistor vs pullup resistor), you should be able to get rise & fall times that are approximately equal as in my photo.

Joe

----- Original Message -----
From: jgaffke
To: AT_Sprint@yahoogroups.com
Sent: Thursday, March 08, 2007 10:55 PM
Subject: [AT_Sprint] Re: ATS3/ATS3A Keying Envelope Fix

Forget all that talk of zeners and current sources.
Joe Rocci's fix works, is easy to do, and the results look great.
It looks like it is also less sensitive to device characteristics.
Same mods should work fine on the ATS3.

I restored my ATS3a back to its original state, then:
Removed the two 0.1uF caps at C42, C43 (C53, C54 on ATS3)
Added two 0.01uF caps from drain to gate at Q4 (Q5 on ATS3)
Added a 100k resistor across C45 (C56 on ATS3)

The new parts can be 0805's.
Removing the old caps is easily done using two soldering irons.
I added the 0.01uF caps right on top of Q4's leads, the drain is the middle pin and the gate is that top outside pin connected to R13.
The 100K resistor across C45 is non-critical, could be 10K to 1Meg, and is there to keep Q4 leakage from charging up C45 when Q4 is off.

The result with 12 volts is a beautiful trapezoidal RF envelope with a 0.9 ms rise time and 4.0 ms fall time. At 6 volts, we get a slightly rounded 4.0 ms rise time and a straight 2.0 ms fall time. This is much better than it was, at 12 volts we used to have a 0.5 ms rise time and a very abrupt fall.

Let us know if anyone sees a way to improve on this, especially that 0.9 ms rise time at 12 volts. Keep in mind that with key up and a 6 volt supply, Q4's Vgs must be at least -4 volts. After a week or so, perhaps Carey could prepend this posting plus any amendments to his keying document in the group's files section.

73's
Jerry Gaffke, KE7ER

--- In AT_Sprint@yahoogroups.com, "Jerry Gaffke" wrote:
> Hi Joe,

> That's a great idea!
> Your approach allows us to slew the gate at Q4 quickly
> to avoid those delays, the feedback cap slows things down
> only when going through Q4's transition region.
> JerryG
>
>--- In AT_Sprint@yahoogroups.com, "Joe Rocci" <joe@> wrote:
>> I implemented very nice envelope control in another homebrew
>> transmitter with a similar FET switch simply by connecting a
>> capacitor between drain and gate of the power FET, and adjusting
>> the drive resistors to get the desired rise-fall time. The
>> capacitive feedback, working against the drive resistor, turns
>> the switch into a very nice integrator with very linear &
>> symmetrical rise and fall ramps.
>> Joe W3JDR

1088. Re: [AT_Sprint] Re: ATS3/ATS3A Keying Envelope Fix

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-09 11:33:58 UTC
From: Joe Rocci
Topic: 1053 Message: 1088

BTW, I also posted a partial schematic of my own homebrew Class E transmitter in the Photos section of my W3JDR folder. It runs about 90% efficient on 40M. Note particularly that the RF amp is AC coupled with some DC bias on the gates of the FETS. This came about as a result of Spice simulations, and it improves the stage efficiency and overall operation when you have low (under 5Vpp) gate drive. Actually, my whole transmitter was analyzed and optimized in Spice before building it, and the results were very close to the simulation.

I encourage all to use Spice before heating up the soldering irons and wrecking PCB's by soldering and unsoldering these hard-to-work-with parts. If you can get a ham license and learn to work with SMD parts, you can learn Spice. Also, it will vastly improve your understanding of how circuits work. There are many free versions available for download. Many people like LTSpice from Linear Technology (www.linear.com), but I find its user interface to be cumbersome. Check out SiMetrix from Catena (www.catena.uk.com) for a free, very nice and easy to use Spice that has a large built-in library of part types.

Joe
W3JDR

----- Original Message -----
From: Joe Rocci
To: AT_Sprint@yahoogroups.com
Sent: Friday, March 09, 2007 6:02 AM
Subject: Re: [AT_Sprint] Re: ATS3/ATS3A Keying Envelope Fix

Jerry,

If you massage the resistor ratios (drive resistor vs pullup resistor), you should be able to get rise & fall times that are approximately equal as in my photo.

Joe

----- Original Message -----
From: jgaffke
To: AT_Sprint@yahoogroups.com
Sent: Thursday, March 08, 2007 10:55 PM
Subject: [AT_Sprint] Re: ATS3/ATS3A Keying Envelope Fix

Forget all that talk of zeners and current sources.
Joe Rocci's fix works, is easy to do, and the results look great.
It looks like it is also less sensitive to device characteristics.
Same mods should work fine on the ATS3.

I restored my ATS3a back to its original state, then:
Removed the two 0.1uF caps at C42, C43 (C53, C54 on ATS3)
Added two 0.01uF caps from drain to gate at Q4 (Q5 on ATS3)
Added a 100k resistor across C45 (C56 on ATS3)

The new parts can be 0805's.
Removing the old caps is easily done using two soldering irons.
I added the 0.01uF caps right on top of Q4's leads, the drain is the
middle pin and the gate is that top outside pin connected to R13.
The 100K resistor across C45 is non-critical, could be 10K to 1Meg,
and is there to keep Q4 leakage from charging up C45 when Q4 is off.

The result with 12 volts is a beautiful trapezoidal RF envelope
with a 0.9 ms rise time and 4.0 ms fall time. At 6 volts, we get a
slightly rounded 4.0 ms rise time and a straight 2.0 ms fall time.
This is much better than it was, at 12 volts we used to have
a 0.5 ms rise time and a very abrupt fall.

Let us know if anyone sees a way to improve on this, especially
that 0.9 ms rise time at 12 volts. Keep in mind that with key up
and a 6 volt supply, Q4's Vgs must be at least -4 volts. After a
week or so, perhaps Carey could prepend this posting plus any
amendments to his keying document in the group's files section.

73's
Jerry Gaffke, KE7ER

--- In AT_Sprint@yahoogroups.com, "Jerry Gaffke" wrote:
> Hi Joe,
> That's a great idea!
> Your approach allows us to slew the gate at Q4 quickly
> to avoid those delays, the feedback cap slows things down
> only when going through Q4's transition region.
> JerryG
>
>--- In AT_Sprint@yahoogroups.com, "Joe Rocci" <joe@> wrote:
>> I implemented very nice envelope control in another homebrew
>> transmitter with a similar FET switch simply by connecting a
>> capacitor between drain and gate of the power FET, and adjusting
>> the drive resistors to get the desired rise-fall time. The
>> capacitive feedback, working against the drive resistor, turns
>> the switch into a very nice integrator with very linear &
>> symmetrical rise and fall ramps.
>> Joe W3JDR

1089. Atlanticon role call

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-09 15:49:33 UTC
From: w1mt
Topic: 1089 Message: 1089

I know that there are a few folks going to Atlanticon, so how bout posting here if you plan on going.

I plan on being there with my two sons. Should be there Friday afternoon till Sunday morning. Hope to meet a bunch of you guys there.

-mike/w1mt

1090. Re: [AT_Sprint] Atlanticon role call

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-09 15:55:38 UTC
From: Jeffrey Embry
Topic: 1089 Message: 1090

Hi Mike,

Dave (WA3OFF) and myself willmost likely come up together. Currently
plan on arriving sometime around 6ish on Friday.

Look forward to meeting you.

72,
--
Jeff Embry, K3OQ
FM19je
ARCI #11643, FPQRP #-696,
QRP-L # 67, NAQCC #25
AMSAT LM-2263

No trees were harmed in the sending of this message, however a large
number of electrons were terribly inconvenienced.

On 3/9/07, w1mt <w1mt@...> wrote:
> I know that there are a few folks going to Atlanticon, so how bout
> posting here if you plan on going.
>
> I plan on being there with my two sons. Should be there Friday
> afternoon till Sunday morning. Hope to meet a bunch of you guys there.
>
> -mike/w1mt
>
>
>
>
>
> Yahoo! Groups Links
>
>
>
>

1091. Re: [AT_Sprint] Atlanticon role call

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-09 15:54:22 UTC
From: kb2tqx
Topic: 1089 Message: 1091

I am planning on being there Mike. I'll be accompanied by my daughter Christine and her boyfriend Romel.

Maybe we'll get to have that dinner together.

Dave Gwillim
KB2TQX

======= At 2007-03-09, 10:49:33 you wrote: =======

>I know that there are a few folks going to Atlanticon, so how bout
>posting here if you plan on going.
>

1092. RE: [AT_Sprint] Atlanticon role call

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-09 16:04:26 UTC
From: Ron Pfeiffer
Topic: 1089 Message: 1092

Hi mike

I will be there with your original ATSII !!!!!

My new call is W2CTX after my mentor when I was 14 years old.

See ya

Ron

1093. Re: ATS3/ATS3A Keying Envelope Fix

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-09 16:43:32 UTC
From: radio_kx0r
Topic: 1053 Message: 1093

Jerry and Joe,

You both have done much great work on the keying problem. I was almost ready to start cutting on my ATS3A when I read these recent messages. In spite of understanding the problem, what we need now is a circuit, drawn in the same arrangement as the original, with designators and component values, so that a non-engineer can make the mods needed to restore good keying to the ATS3 or ATS3A, without having to hunt through all these emails.

Even though I understand what both of you have written about your mods, I would have trouble duplicating your work at this point.

We need to lay this out in cookbook fashion for everyone who wants to do the mod, and maybe even for Steve to see, unless he's already ahead of us on this.

I think .9 ms rise is too short - we need to be at about 2-5 ms for the right sound and no clicks, in my opinion. I don't think we have this quite worked out where poeple can duplicate it. My original change of one resistor actually gives a pretty good result at 10-12V, so I'm still reluctant to start cutting or melting until we have something better over the whole voltage range. Maybe we'll end up with something like Joe's circuit, but add a jumper to tweak it for higher or lower voltages. Joe's waveforms are sweet, but that's not the ATS3A rig, right? That circuit posted just looks too simple, and I can't quite relate it to the ATS3A yet.

I think we're nearly there...

Thank you - when I first posted my notes on the keying, I thought maybe I was all wrong and had done something goofy - then there was little respone for a while. This may yet have a nice ending.

72/73 Carey KX0R

> Forget all that talk of zeners and current sources.
> Joe Rocci's fix works, is easy to do, and the results look great.
> It looks like it is also less sensitive to device characteristics.
> Same mods should work fine on the ATS3.
>
> I restored my ATS3a back to its original state, then:
> Removed the two 0.1uF caps at C42, C43 (C53, C54 on ATS3)
> Added two 0.01uF caps from drain to gate at Q4 (Q5 on ATS3)
> Added a 100k resistor across C45 (C56 on ATS3)
>
> The new parts can be 0805's.

> Removing the old caps is easily done using two soldering irons.
> I added the 0.01uF caps right on top of Q4's leads, the drain is the
> middle pin and the gate is that top outside pin connected to R13.
> The 100K resistor across C45 is non-critical, could be 10K to 1Meg,
> and is there to keep Q4 leakage from charging up C45 when Q4 is off.
>
> The result with 12 volts is a beautiful trapezoidal RF envelope
> with a 0.9 ms rise time and 4.0 ms fall time. At 6 volts, we get a
> slightly rounded 4.0 ms rise time and a straight 2.0 ms fall time.
> This is much better than it was, at 12 volts we used to have
> a 0.5 ms rise time and a very abrupt fall.
>
> Let us know if anyone sees a way to improve on this, especially
> that 0.9 ms rise time at 12 volts. Keep in mind that with key up
> and a 6 volt supply, Q4's Vgs must be at least -4 volts. After a
> week or so, perhaps Carey could prepend this posting plus any
> amendments to his keying document in the group's files section.
>
> 73's
> Jerry Gaffke, KE7ER
>
>
>
> --- In AT_Sprint@yahoogroups.com, "Jerry Gaffke" wrote:
> > Hi Joe,
> > That's a great idea!
> > Your approach allows us to slew the gate at Q4 quickly
> > to avoid those delays, the feedback cap slows things down
> > only when going through Q4's transition region.
> > JerryG
> >
> >--- In AT_Sprint@yahoogroups.com, "Joe Rocci" <joe@> wrote:
> >> I implemented very nice envelope control in another homebrew
> >> transmitter with a similar FET switch simply by connecting a
> >> capacitor between drain and gate of the power FET, and adjusting
> >> the drive resistors to get the desired rise-fall time. The
> >> capacitive feedback, working against the drive resistor, turns
> >> the switch into a very nice integrator with very linear &
> >> symmetrical rise and fall ramps.
> >> Joe W3JDR
>

1094. Re: [AT_Sprint] Re: ATS3/ATS3A Keying Envelope Fix

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-09 17:00:44 UTC
From: David D. Meacham
Topic: 1053 Message: 1094

Carey,
My feelings exactly!
72, Dave, W6EMD

1095. RE: [AT_Sprint] Atlanticon role call

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-09 17:05:35 UTC
From: Kenneth Moorman
Topic: 1089 Message: 1095

I plan to attend, arriving Friday afternoon. Is there a gathering place so we can meet before dinner? I'll bring my ATS-3.

Ken, NU4I

-----Original Message-----
From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com] On Behalf Of w1mt
Sent: Friday, March 09, 2007 10:50 AM
To: AT_Sprint@yahoogroups.com
Subject: [AT_Sprint] Atlanticon role call

I know that there are a few folks going to Atlanticon, so how bout posting here if you plan on going.

I plan on being there with my two sons. Should be there Friday afternoon till Sunday morning. Hope to meet a bunch of you guys there.

-mike/w1mt

Yahoo! Groups Links

1096. Re: ATS3/ATS3A Keying Envelope Fix

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-09 17:36:46 UTC
From: jgaffke
Topic: 1053 Message: 1096

Hi Joe,

I'm not so sure we can do much better without somewhat
more extensive mods.

In the schematic in your file "keying_ckt.jpg", with Q4 off we have
R1 driving the gate from 8_VDC (I assume 8 volts) through 10K.
With Q4 on, we drive the gate with the thevenin equivalent of
R1 and R2 in parallel, or 3.55 volts through 4.44K.

You get symetric waveforms if the currents from the two above
cases into C2 are equal as the gate of Q1 goes through its
transition region. From this, I figure Q1's transition region
to be centered on 4.9 volts, which agrees with figure 3 of
www.irf.com/product-info/datasheets/data/irfl9014.pdf

On the ATS3A, we must operate from 6 to 12 volts. At 6 volts with
key down, Q4's Vgs must be at least -4 volts, so R13 must be no more
than half the ohms of R14. The envelope rounds out with key down
at 6 volts since our thevenin equivalent drive voltage of 4 volts
is very close to where Q4's gate wants to be during the transition,
and thus the current into the feedback cap is low.

We could do better by replacing Q3 with an LMC7211 comparator in
the SOT23-5 package: http://cache.national.com/ds/LM/LMC7211.pdf
Pins 4 and 5 drop right into Q3's T/R and Gnd pads, pins 1,2,3
are wired up to the bottom of R14 (R13 is removed), source pin of Q4
(for V+), and perhaps the top of C24 for a 2.5v reference voltage,
respectively. With key down, this drives R14 with V+ volts. With key
up, drives R14 with Gnd. Should work fine with V+ from 5 to 12v.
Still not symmetric at 12v, but much better than the simple mod.

Could go even further and power the LMC7211 between V+ and a rail
at (V+ - 2*Vgs), the rail set by a zener. I figure Vgs to be
around 3.25v at the center of Q4's transition. Add 2 resistors to
set a reference for input+, add three more in series to allow the
MSP430 to lightly drive input- around that reference.
This would give symmetric and consistent slew rates across
supply voltage. Note that actual rise and fall times increase
with the envelope amplitude, not sure how one would best fix this.

I'll try to post schematics over the weekend for all of the above,
that's all the time I have for this today.

73's
Jerry Gaffke, KE7ER

--- In AT_Sprint@yahoogroups.com, "Joe Rocci" <joe@...> wrote:
> If you massage the resistor ratios (drive resistor vs pullup resistor), you should be able to get rise & fall times that are approximately equal as in my photo.

1097. Re: [AT_Sprint] Re: ATS3/ATS3A Keying Envelope Fix

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-09 17:39:57 UTC
From: Joe Rocci
Topic: 1053 Message: 1097

The schematic I posted isn't quite what I ended up with. My actual keying circuit is almost identical to the ATS-3A circuit except I used a different but similar switching FET (IRFL9014), so it's pretty easy to make the mods. Keep in mind I haven't tested his on the ATS-3A yet, just in my rig, but it should work. Perhaps Jerry or someone else who has time to test it can verify the result:

Change R14 from 47K to 100K
Change R13 from 22K to 10 K
Remove C42
Remove C43
Solder a .01uf from the gate of Q4 to the drain of Q4 (the drain is the side that C45 is connected to).

Perhaps after this is tested and verified, someone can post a photo of the mods.

Joe
W3JDR

----- Original Message -----
From: radio_kx0r
To: AT_Sprint@yahoogroups.com
Sent: Friday, March 09, 2007 11:43 AM
Subject: [AT_Sprint] Re: ATS3/ATS3A Keying Envelope Fix

Jerry and Joe,

You both have done much great work on the keying problem. I was almost ready to start cutting on my ATS3A when I read these recent messages. In spite of understanding the problem, what we need now is a circuit, drawn in the same arrangement as the original, with designators and component values, so that a non-engineer can make the mods needed to restore good keying to the ATS3 or ATS3A, without having to hunt through all these emails.

Even though I understand what both of you have written about your mods, I would have trouble duplicating your work at this point.

We need to lay this out in cookbook fashion for everyone who wants to do the mod, and maybe even for Steve to see, unless he's already ahead of us on this.

I think .9 ms rise is too short - we need to be at about 2-5 ms for the right sound and no clicks, in my opinion. I don't think we have this quite worked out where poeple can duplicate it. My original change of one resistor actually gives a pretty good result at 10-12V, so I'm still reluctant to start cutting or melting until we have something better over the whole voltage range. Maybe we'll end up

with something like Joe's circuit, but add a jumper to tweak it for
higher or lower voltages. Joe's waveforms are sweet, but that's not
the ATS3A rig, right? That circuit posted just looks too simple, and
I can't quite relate it to the ATS3A yet.

I think we're nearly there...

Thank you - when I first posted my notes on the keying, I thought
maybe I was all wrong and had done something goofy - then there was
little respone for a while. This may yet have a nice ending.

72/73 Carey KX0R
>
> Forget all that talk of zeners and current sources.
> Joe Rocci's fix works, is easy to do, and the results look great.
> It looks like it is also less sensitive to device characteristics.
> Same mods should work fine on the ATS3.
>
> I restored my ATS3a back to its original state, then:
> Removed the two 0.1uF caps at C42, C43 (C53, C54 on ATS3)
> Added two 0.01uF caps from drain to gate at Q4 (Q5 on ATS3)
> Added a 100k resistor across C45 (C56 on ATS3)
>
> The new parts can be 0805's.
> Removing the old caps is easily done using two soldering irons.
> I added the 0.01uF caps right on top of Q4's leads, the drain is the
> middle pin and the gate is that top outside pin connected to R13.
> The 100K resistor across C45 is non-critical, could be 10K to 1Meg,
> and is there to keep Q4 leakage from charging up C45 when Q4 is off.
>
> The result with 12 volts is a beautiful trapezoidal RF envelope
> with a 0.9 ms rise time and 4.0 ms fall time. At 6 volts, we get a
> slightly rounded 4.0 ms rise time and a straight 2.0 ms fall time.
> This is much better than it was, at 12 volts we used to have
> a 0.5 ms rise time and a very abrupt fall.
>
> Let us know if anyone sees a way to improve on this, especially
> that 0.9 ms rise time at 12 volts. Keep in mind that with key up
> and a 6 volt supply, Q4's Vgs must be at least -4 volts. After a
> week or so, perhaps Carey could prepend this posting plus any
> amendments to his keying document in the group's files section.
>
> 73's
> Jerry Gaffke, KE7ER
>
>
>
> --- In AT_Sprint@yahoogroups.com, "Jerry Gaffke" wrote:
> > Hi Joe,
> > That's a great idea!
> > Your approach allows us to slew the gate at Q4 quickly

> > to avoid those delays, the feedback cap slows things down
> > only when going through Q4's transition region.
> > JerryG
> >
> >--- In AT_Sprint@yahoogroups.com, "Joe Rocci" <joe@> wrote:
> >> I implemented very nice envelope control in another homebrew
> >> transmitter with a similar FET switch simply by connecting a
> >> capacitor between drain and gate of the power FET, and adjusting
> >> the drive resistors to get the desired rise-fall time. The
> >> capacitive feedback, working against the drive resistor, turns
> >> the switch into a very nice integrator with very linear &
> >> symmetrical rise and fall ramps.
> >> Joe W3JDR
>

1098. Re: ATS3/ATS3A Keying Envelope Fix

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-09 18:04:20 UTC
From: jgaffke
Topic: 1053 Message: 1098

Joe,

Did the circuit you posted in keying_ckt.jpg give a waveform
like that posted in waveshaping.jpg using R1=100K, R2=10K,
C2=0.01uF, 8_VDC=8 volts? If not, how did you arrive at 10K/100K?

I may be missing something here (I often am), but those values
look like they would give some rather asymmetrical results.

Jerry

--- In AT_Sprint@yahoogroups.com, "Joe Rocci" <joe@...> wrote:
>
> The schematic I posted isn't quite what I ended up with. My actual
keying circuit is almost identical to the ATS-3A circuit except I used
a different but similar switching FET (IRFL9014), so it's pretty easy
to make the mods. Keep in mind I haven't tested his on the ATS-3A yet,
just in my rig, but it should work. Perhaps Jerry or someone else who
has time to test it can verify the result:
>
> Change R14 from 47K to 100K
> Change R13 from 22K to 10 K
> Remove C42
> Remove C43
> Solder a .01uf from the gate of Q4 to the drain of Q4 (the drain is
the side that C45 is connected to).
>
> Perhaps after this is tested and verified, someone can post a photo
of the mods.
>
> Joe
> W3JDR

1099. Re: ATS3/ATS3A Keying Envelope Fix

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-09 18:31:37 UTC
From: jgaffke
Topic: 1053 Message: 1099

Some minor corrections are needed here:

>I figure Q1's transition region to be centered on 4.9 volts,
Thats a Vgs of -4.9 volts, so 4.9 volts below the 8 volt rail.

>We could do better by replacing Q3 with an LMC7211 comparator...
>With key down, this drives R14 with V+ volts.
>With key up, drives R14 with Gnd.
I got key down and key up reversed here. Note that the MSP430
is driving the INPUT- pin of the LMC7211 comparator,
so the comparator inverts just like the transistor did.

Jerry

--- In AT_Sprint@yahoogroups.com, "jgaffke" <jgaffke@...> wrote:
>
> Hi Joe,
>
> I'm not so sure we can do much better without somewhat
> more extensive mods.
>
> In the schematic in your file "keying_ckt.jpg", with Q4 off we have
> R1 driving the gate from 8_VDC (I assume 8 volts) through 10K.
> With Q4 on, we drive the gate with the thevenin equivalent of
> R1 and R2 in parallel, or 3.55 volts through 4.44K.
>
> You get symetric waveforms if the currents from the two above
> cases into C2 are equal as the gate of Q1 goes through its
> transition region. From this, I figure Q1's transition region
> to be centered on 4.9 volts, which agrees with figure 3 of
> www.irf.com/product-info/datasheets/data/irfl9014.pdf
>
>
> On the ATS3A, we must operate from 6 to 12 volts. At 6 volts with
> key down, Q4's Vgs must be at least -4 volts, so R13 must be no more
> than half the ohms of R14. The envelope rounds out with key down
> at 6 volts since our thevenin equivalent drive voltage of 4 volts
> is very close to where Q4's gate wants to be during the transition,
> and thus the current into the feedback cap is low.
>
> We could do better by replacing Q3 with an LMC7211 comparator in
> the SOT23-5 package: http://cache.national.com/ds/LM/LMC7211.pdf
> Pins 4 and 5 drop right into Q3's T/R and Gnd pads, pins 1,2,3
> are wired up to the bottom of R14 (R13 is removed), source pin of Q4
> (for V+), and perhaps the top of C24 for a 2.5v reference voltage,
> respectively. With key down, this drives R14 with V+ volts. With key

> up, drives R14 with Gnd. Should work fine with V+ from 5 to 12v.
> Still not symmetric at 12v, but much better than the simple mod.
>
> Could go even further and power the LMC7211 between V+ and a rail
> at (V+ - 2*Vgs), the rail set by a zener. I figure Vgs to be
> around 3.25v at the center of Q4's transition. Add 2 resistors to
> set a reference for input+, add three more in series to allow the
> MSP430 to lightly drive input- around that reference.
> This would give symmetric and consistent slew rates across
> supply voltage. Note that actual rise and fall times increase
> with the envelope amplitude, not sure how one would best fix this.
>
> I'll try to post schematics over the weekend for all of the above,
> that's all the time I have for this today.
>
> 73's
> Jerry Gaffke, KE7ER
>
>
>
> --- In AT_Sprint@yahoogroups.com, "Joe Rocci" <joe@> wrote:
> > If you massage the resistor ratios (drive resistor vs pullup
> resistor), you should be able to get rise & fall times that are
> approximately equal as in my photo.
>

1100. Re: [AT_Sprint] Re: ATS3/ATS3A Keying Envelope Fix

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-09 18:52:26 UTC
From: Joe Rocci
Topic: 1053 Message: 1100

Jerry,

See my last post.

After I read my notes I realized that the schematic I posted was out of date. The real circuit is exactly like the ATS, except for the feedback cap. With the values I posted in the last email, the charge and discharge currents are only 10% different. It works (at least at 9 volts) as can be seen from the envelope I posted.

Joe
W3JDR

----- Original Message -----
From: jgaffke
To: AT_Sprint@yahoogroups.com
Sent: Friday, March 09, 2007 12:36 PM
Subject: [AT_Sprint] Re: ATS3/ATS3A Keying Envelope Fix

Hi Joe,

I'm not so sure we can do much better without somewhat
more extensive mods.

In the schematic in your file "keying_ckt.jpg", with Q4 off we have
R1 driving the gate from 8_VDC (I assume 8 volts) through 10K.
With Q4 on, we drive the gate with the thevenin equivalent of
R1 and R2 in parallel, or 3.55 volts through 4.44K.

You get symetric waveforms if the currents from the two above
cases into C2 are equal as the gate of Q1 goes through its
transition region. From this, I figure Q1's transition region
to be centered on 4.9 volts, which agrees with figure 3 of
www.irf.com/product-info/datasheets/data/irfl9014.pdf

On the ATS3A, we must operate from 6 to 12 volts. At 6 volts with
key down, Q4's Vgs must be at least -4 volts, so R13 must be no more
than half the ohms of R14. The envelope rounds out with key down
at 6 volts since our thevenin equivalent drive voltage of 4 volts
is very close to where Q4's gate wants to be during the transition,
and thus the current into the feedback cap is low.

We could do better by replacing Q3 with an LMC7211 comparator in
the SOT23-5 package: http://cache.national.com/ds/LM/LMC7211.pdf
Pins 4 and 5 drop right into Q3's T/R and Gnd pads, pins 1,2,3
are wired up to the bottom of R14 (R13 is removed), source pin of Q4
(for V+), and perhaps the top of C24 for a 2.5v reference voltage,
respectively. With key down, this drives R14 with V+ volts. With key

up, drives R14 with Gnd. Should work fine with V+ from 5 to 12v.
Still not symmetric at 12v, but much better than the simple mod.

Could go even further and power the LMC7211 between V+ and a rail
at (V+ - 2*Vgs), the rail set by a zener. I figure Vgs to be
around 3.25v at the center of Q4's transition. Add 2 resistors to
set a reference for input+, add three more in series to allow the
MSP430 to lightly drive input- around that reference.
This would give symmetric and consistent slew rates across
supply voltage. Note that actual rise and fall times increase
with the envelope amplitude, not sure how one would best fix this.

I'll try to post schematics over the weekend for all of the above,
that's all the time I have for this today.

73's
Jerry Gaffke, KE7ER

--- In AT_Sprint@yahoogroups.com, "Joe Rocci" <joe@...> wrote:
> If you massage the resistor ratios (drive resistor vs pullup
resistor), you should be able to get rise & fall times that are
approximately equal as in my photo.

1101. Re: [AT_Sprint] Re: ATS3/ATS3A Keying Envelope Fix

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-09 19:42:57 UTC
From: Joe Rocci
Topic: 1053 Message: 1101

I just checked my actual unit and my notes again, and what said in my last post is still accurate - my switching circuit is the same basic topology as the AST3A except for the changes I noted. I also ran the Spice simulation again. At 9V (my circuit runs on 9V, not 6V) the rise & fall times are about 2ms with the values noted (.01uf driving against 100K; 10K pullup). At 6V, the feedback cap needs to be reduced by a factor of about 2 to get the same result. A 'straddle' value can probably be determined that will work sufficiently well for both voltages.

Joe
W3JDR

----- Original Message -----
From: Joe Rocci
To: AT_Sprint@yahoogroups.com
Sent: Friday, March 09, 2007 1:52 PM
Subject: Re: [AT_Sprint] Re: ATS3/ATS3A Keying Envelope Fix

Jerry,

See my last post.

After I read my notes I realized that the schematic I posted was out of date. The real circuit is exactly like the ATS, except for the feedback cap. With the values I posted in the last email, the charge and discharge currents are only 10% different. It works (at least at 9 volts) as can be seen from the envelope I posted.

Joe
W3JDR

----- Original Message -----
From: jgaffke
To: AT_Sprint@yahoogroups.com
Sent: Friday, March 09, 2007 12:36 PM
Subject: [AT_Sprint] Re: ATS3/ATS3A Keying Envelope Fix

Hi Joe,

I'm not so sure we can do much better without somewhat
more extensive mods.

In the schematic in your file "keying_ckt.jpg", with Q4 off we have
R1 driving the gate from 8_VDC (I assume 8 volts) through 10K.
With Q4 on, we drive the gate with the thevenin equivalent of
R1 and R2 in parallel, or 3.55 volts through 4.44K.

You get symetric waveforms if the currents from the two above
cases into C2 are equal as the gate of Q1 goes through its
transition region. From this, I figure Q1's transition region

to be centered on 4.9 volts, which agrees with figure 3 of
www.irf.com/product-info/datasheets/data/irfl9014.pdf

On the ATS3A, we must operate from 6 to 12 volts. At 6 volts with key down, Q4's Vgs must be at least -4 volts, so R13 must be no more than half the ohms of R14. The envelope rounds out with key down at 6 volts since our thevenin equivalent drive voltage of 4 volts is very close to where Q4's gate wants to be during the transition, and thus the current into the feedback cap is low.

We could do better by replacing Q3 with an LMC7211 comparator in the SOT23-5 package: http://cache.national.com/ds/LM/LMC7211.pdf Pins 4 and 5 drop right into Q3's T/R and Gnd pads, pins 1,2,3 are wired up to the bottom of R14 (R13 is removed), source pin of Q4 (for V+), and perhaps the top of C24 for a 2.5v reference voltage, respectively. With key down, this drives R14 with V+ volts. With key up, drives R14 with Gnd. Should work fine with V+ from 5 to 12v. Still not symmetric at 12v, but much better than the simple mod.

Could go even further and power the LMC7211 between V+ and a rail at (V+ - 2*Vgs), the rail set by a zener. I figure Vgs to be around 3.25v at the center of Q4's transition. Add 2 resistors to set a reference for input+, add three more in series to allow the MSP430 to lightly drive input- around that reference.
This would give symmetric and consistent slew rates across supply voltage. Note that actual rise and fall times increase with the envelope amplitude, not sure how one would best fix this.

I'll try to post schematics over the weekend for all of the above, that's all the time I have for this today.

73's
Jerry Gaffke, KE7ER

--- In AT_Sprint@yahoogroups.com, "Joe Rocci" <joe@...> wrote:
> If you massage the resistor ratios (drive resistor vs pullup resistor), you should be able to get rise & fall times that are approximately equal as in my photo.

1102. Re: [AT_Sprint] Re: ATS3/ATS3A Keying Envelope Fix

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-09 20:03:52 UTC
From: Joe Rocci
Topic: 1053 Message: 1102

OK guys, one more time.....

It's Friday afternoon and I'm running around trying to finish a lot of things and I'm moving too fast and I'm tired, and I still don't have this straight for you. Anyway, here's what I think is finally an accurate description of how the circuit should be. I just posted 2 screen captures in a new folder (inside W3JDR/Photos). One of them shows the circuit in the Spice schematic capture window and the other shows the simulation result. As you can see, the correct circuit IS a little different than the present ATS-3A circuit, but not hard to implement. I know this circuit works as described previously because I've built about 6 transmitters using it and they all work as the photo of the RF envelope shows. The only variable I see in reproduceability would be the FET used in the ATS vs the FET I used. I doubt if there will be much difference.

Sorry for the confusion.....back to my chaotic day

Joe
W3JDR

1103. Re: ATS3/ATS3A Keying Envelope Fix

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-09 20:58:50 UTC
From: jgaffke
Topic: 1053 Message: 1103

Hi Joe,

That explains it, your spice model circuit looks great!
I'd expect pretty much the same performance as that comparator
scheme I was proposing earlier this morning, but with much
less trouble. I think we can trim it to keep all rise/fall times
within the 3 to 6 ms region across the 6 to 12 volt supply range.
In fact, should work fine to below 5 volts.

Thanks!
Jerry Gaffke, KE7ER

--- In AT_Sprint@yahoogroups.com, "Joe Rocci" <joe@...> wrote:
>
> OK guys, one more time.......
>
> It's Friday afternoon and I'm running around trying to finish a lot
of things and I'm moving too fast and I'm tired, and I still don't
have this straight for you. Anyway, here's what I think is finally an
accurate description of how the circuit should be. I just posted 2
screen captures in a new folder (inside W3JDR/Photos). One of them
shows the circuit in the Spice schematic capture window and the other
shows the simulation result. As you can see, the correct circuit IS a
little different than the present ATS-3A circuit, but not hard to
implement. I know this circuit works as described previously because
I've built about 6 transmitters using it and they all work as the
photo of the RF envelope shows. The only variable I see in
reproduceability would be the FET used in the ATS vs the FET I used. I
doubt if there will be much difference.
>
> Sorry for the confusion.....back to my chaotic day
>
> Joe
> W3JDR

1104. Re: [AT_Sprint] Re: ATS3/ATS3A Keying Envelope Fix

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-09 21:55:37 UTC
From: Steven Weber
Topic: 1053 Message: 1104

Okay, I've been trying the various ideas presented. Joe's 100K pull up and .01 from gate to drain results in reasonably consistand fall times, 2 ms at 6 v and 4 ms at 12 volts. Having the slower fall time at higher power is good.

The real problem is getting consistant rise times. I finally found a solution to that. The trick is to work against a voltage which is constant in respect to the supply voltage. I connected a 5.1 volt zener from the + supply to ground through a 2.2 K resistor. This produces a voltage which is always 5 volts less than the supply. In order to switch the discharge resistor in and out, a 2N3904 is added. The base connects to the zener/resistor, the collector to the discharge resistor and the emittor back to the 2N7002 drain. 47 K for the discharge resistor gives a pretty consistant 4 ms rise time over the 2:1 supply voltage range.

This is not a real clean mod to make, but seems to work the best if you want it to do so over a wide supply range. Hopefully I can fit these parts on the "B" board <G>

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

1105. Re: [AT_Sprint] Re: ATS3/ATS3A Keying Envelope Fix

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-09 23:08:15 UTC
From: Joe Rocci
Topic: 1053 Message: 1105

Steve,

Your mod sounds good for the next rev PCB, but I don't think there will be too much of a problem if the simpler mod I suggested is implemented and optimized at 12V. When you drop to 6V the rise time will double but the fall time is pretty constant. The 2:1 increase in rise time at 6V shouldn'y be a problem so long as it wasn't any longer than necessary at 12V. It will make the keying a little 'softer' at low power levels, but my gut feeling is that it will be tolerable.

Joe
W3JDR
----- Original Message -----
From: Steven Weber
To: AT_Sprint@yahoogroups.com
Sent: Friday, March 09, 2007 4:55 PM
Subject: Re: [AT_Sprint] Re: ATS3/ATS3A Keying Envelope Fix

Okay, I've been trying the various ideas presented. Joe's 100K pull up and .01 from gate to drain results in reasonably consistand fall times, 2 ms at 6 v and 4 ms at 12 volts. Having the slower fall time at higher power is good.

The real problem is getting consistant rise times. I finally found a solution to that. The trick is to work against a voltage which is constant in respect to the supply voltage. I connected a 5.1 volt zener from the + supply to ground through a 2.2 K resistor. This produces a voltage which is always 5 volts less than the supply. In order to switch the discharge resistor in and out, a 2N3904 is added. The base connects to the zener/resistor, the collector to the discharge resistor and the emittor back to the 2N7002 drain. 47 K for the discharge resistor gives a pretty consistant 4 ms rise time over the 2:1 supply voltage range.

This is not a real clean mod to make, but seems to work the best if you want it to do so over a wide supply range. Hopefully I can fit these parts on the "B" board <G>

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

1106. Re: ATS3/ATS3A Keying Envelope Fix

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-09 23:10:14 UTC
From: jgaffke
Topic: 1053 Message: 1106

I'm not modeling this, just sitting at my desk thinking
on a Friday afternoon when I should be working.
Not sure what would really work.

Maybe take Joe's spice circuit and put the zener in parallel
with his 10K, then add a 1K in series with the 2n7002 drain lead
to limit the zener current. The zener current only flows when
the key is down. When V+ is down at 5 volts, we still have
a quiesent Vgs at Q4 of -4.5 volts with key down.
This should be an easy mod, and give constant slew rates
across varying supply voltages.

The zener voltage should be high enough to put the NDT2955 Vgs
transition region in the middle of the gate swing to keep things symetrical.
I think that's about 6.5 volts, since I was seeing Q4 transitions
at Vgs between 3 and 3.5 volts. I'd err on the side of too big.

Jerry Gaffke, KE7ER

1107. Re: [AT_Sprint] Re: ATS3/ATS3A Keying Envelope Fix

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-10 01:59:03 UTC
From: Steven Weber
Topic: 1053 Message: 1107

Please disregard the keying fix I posted earlier. There needs to be at least one more resistor inserted, between the emitter of the transistor and drain of the 7002. Can't have a zener connected to the + supply, going through a diode junction in the transistor and then try to pull it to ground! Seems it burns out the 7002.

What I think will work, and eliminates the transisor is to connect R13 to the zener/2.2K junction and turning that on and off the ground end of the 2.2 K directly with the 2N7002.

Unfortunetly, it seems I've got a serious static problem today and have distoyed every mosfet I've touched the last few hours, including the pass fet and pull up output of the MSP430! I give up. Three days of subzero temps with dew points of -30 degress has caught up with me, dispite the wooden work bench and bare concrete floor. Never had static problems here before.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

1108. Re: ATS3/ATS3A Keying Envelope Fix

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-10 07:44:43 UTC
From: jgaffke
Topic: 1053 Message: 1108

In the files section under KE7ER is the schematic keyclick00.pdf
Though not final, I think it shows where we are headed on this.
I don't have a soldering iron with me this evening, but did have
a schematic editor.

It's mostly Joe's circuit, using capacitive feedback around Q4.
It also has a zener to keep things more or less symmetrical at 12v.
Values shown are a bit conservative, we probably want softer
rise and fall times. The zener should be one of the smaller
guys, with the voltage shown spec'ed at 5 ma.

When modding an old rig, the zener is not really necessary.
If the zener is left out, then R13 can be zero ohms (a wire).
That makes it easier to use the available pads and traces.
When modding an ATS3 you can leave Q3 as it is, the mods
start with R13 (R14 on the ATS3).

Of course you may not want to hack your rig just yet if you
don't have a scope, nobody has actually proved this out yet.

I also posted the ATS3A manual, so those with an ATS3 can
better follow the reference designators when we discuss mods.

73's
Jerry Gaffke, KE7ER

1109. Re: [AT_Sprint] Re: ATS3/ATS3A Keying Envelope Fix

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-10 10:41:07 UTC
From: Joe Rocci
Topic: 1053 Message: 1109

Jerry,

I modeled your circuit and it indeed does allow you to have near constant rise-time as the supply varies from 6 to 12 volts, but the fall time is still twice as fast at 6V as it is at 12V. I posted the Spice result in my ATS-3A Keying Mods folder.

Joe
W3JDR

----- Original Message -----
From: jgaffke
To: AT_Sprint@yahoogroups.com
Sent: Saturday, March 10, 2007 2:44 AM
Subject: [AT_Sprint] Re: ATS3/ATS3A Keying Envelope Fix

In the files section under KE7ER is the schematic keyclick00.pdf
Though not final, I think it shows where we are headed on this.
I don't have a soldering iron with me this evening, but did have
a schematic editor.

It's mostly Joe's circuit, using capacitive feedback around Q4.
It also has a zener to keep things more or less symmetrical at 12v.
Values shown are a bit conservative, we probably want softer
rise and fall times. The zener should be one of the smaller
guys, with the voltage shown spec'ed at 5 ma.

When modding an old rig, the zener is not really necessary.
If the zener is left out, then R13 can be zero ohms (a wire).
That makes it easier to use the available pads and traces.
When modding an ATS3 you can leave Q3 as it is, the mods
start with R13 (R14 on the ATS3).

Of course you may not want to hack your rig just yet if you
don't have a scope, nobody has actually proved this out yet.

I also posted the ATS3A manual, so those with an ATS3 can
better follow the reference designators when we discuss mods.

73's
Jerry Gaffke, KE7ER

1110. Re: Atlanticon role call

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-10 13:19:41 UTC
From: Bruce Beford
Topic: 1089 Message: 1110

I'll be at Atlanticon as well. I plan on arriving late Friday
afternoon. It will be good to see some of you there.

-Bruce N1RX

1111. Re: ATS3/ATS3A Keying Envelope Fix

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-10 18:50:14 UTC
From: jgaffke
Topic: 1053 Message: 1111

Hi Joe,

Try this. Create two graphs. One with the zener, and has
R13=1K. The other without the zener, and has R13=0.
For each graph do three runs of the simulator, with V+ at
6.0, 7.5 and 12 volts.

The diode is to give us constant slew rates, so the slope of the
rising and falling edges remain constant. That's not the
same as constant rise and fall times.

Yesterday morning I had a long post that started and ended with:
>I'm not so sure we can do much better without ....
>This would give symmetric and consistent slew rates across
>supply voltage. Note that actual rise and fall times increase
>with the envelope amplitude, not sure how one would best fix this.

That comment still stands with the circuit I posted. Making all
rise and fall times constant would probably take something like
a variable resistor at R101.

At 6 volts, the rising edge runs out of gas. This is especially
true with the diode, because that 1K at R13 means we can only
drive the near end of R101 down to 0.1 * V+ = 0.6 volts above Gnd.
That's getting too close to the transition region of Q4, which
is centered around 3.25 volts below V+. The difference is
6 - 3.25 - .6 = 2.15 volts, so not much current through R101.
On the rising edge we drive R101 at V+, which is always 3.25 volts
above the transition region. Hence, things are not balanced at 6v.

Without the zener, rising edge slew rate gets faster as V+ goes up.
We drive R101 with 0 volts, which is V+ - 3.25 volts below Q4's
transition region. At 6 volts that works out to a difference of
6 - 3.25 = 2.75 volts, while at 12 volts we get 12 - 3.25 = 8.75.
So the 12 volt case slews about three times as fast as the 6 volt
case on the rising edge. Slew rate on the falling edge is the
same at 6 or 12, this is not affected by the zener.

My vote's for including the zener.
Mostly because it gives such a pretty envelope at 12v,
and in spite of the slowing of the rising edge at 6v.
But a lot of the value of the rig is in how simple Steve has
managed to keep it, only including features that really make
a difference. With or without the zener this is much better
than before, and there were apparently very few complaints.

My last posting of March 8 describes a mod that is still an option, is very easy to do, and gives results almost as good as anything descibed above. If you operate at over 10v, and if you don't want to mess with it much, you should at least consider this:

>Removed the two 0.1uF caps at C42, C43 (C53, C54 on ATS3)
>Added two 0.01uF caps from drain to gate at Q4 (Q5 on ATS3)
>Added a 100k resistor across C45 (C56 on ATS3)

The drain of Q4 is the center pin and the big tab, connected to L3. The two 0.01uF caps (or one 0.02uF cap) could be wire leaded, they get soldered directly to Q4, which is very mechanically stable. Just be sure you have the right value, a 0.1uF cap will not work. The resistor (could be anything from 10K to 1Meg) could also be wire leaded, perhaps soldering it from Q4's tab to a ground at the switches. I'd advise against soldering big stuff like 1/8'th watt resistors to chip caps and chip resistors, as they fracture easily (and unnoticeably) under mechanical stres.

73's
Jerry Gaffke, KE7ER

--- In AT_Sprint@yahoogroups.com, "Joe Rocci" <joe@...> wrote:
> I modeled your circuit and it indeed does allow you to have near constant rise-time as the supply varies from 6 to 12 volts, but the fall time is still twice as fast at 6V as it is at 12V. I posted the Spice result in my ATS-3A Keying Mods folder.

1112. Re: [AT_Sprint] Re: ATS3/ATS3A Keying Envelope Fix

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-10 19:15:38 UTC
From: Joe Rocci
Topic: 1053 Message: 1112

Jerry,

I posted them in my mods folder. File names are Case 4 and Case 5

Joe
W3JDR

----- Original Message -----
From: jgaffke
To: AT_Sprint@yahoogroups.com
Sent: Saturday, March 10, 2007 1:50 PM
Subject: [AT_Sprint] Re: ATS3/ATS3A Keying Envelope Fix

Hi Joe,

Try this. Create two graphs. One with the zener, and has
R13=1K. The other without the zener, and has R13=0.
For each graph do three runs of the simulator, with V+ at
6.0, 7.5 and 12 volts.

The diode is to give us constant slew rates, so the slope of the
rising and falling edges remain constant. That's not the
same as constant rise and fall times.

Yesterday morning I had a long post that started and ended with:
>I'm not so sure we can do much better without ....
>This would give symmetric and consistent slew rates across
>supply voltage. Note that actual rise and fall times increase
>with the envelope amplitude, not sure how one would best fix this.

That comment still stands with the circuit I posted. Making all
rise and fall times constant would probably take something like
a variable resistor at R101.

At 6 volts, the rising edge runs out of gas. This is especially
true with the diode, because that 1K at R13 means we can only
drive the near end of R101 down to 0.1 * V+ = 0.6 volts above Gnd.
That's getting too close to the transition region of Q4, which
is centered around 3.25 volts below V+. The difference is
6 - 3.25 - .6 = 2.15 volts, so not much current through R101.
On the rising edge we drive R101 at V+, which is always 3.25 volts
above the transition region. Hence, things are not balanced at 6v.

Without the zener, rising edge slew rate gets faster as V+ goes up.
We drive R101 with 0 volts, which is V+ - 3.25 volts below Q4's
transition region. At 6 volts that works out to a difference of
6 - 3.25 = 2.75 volts, while at 12 volts we get 12 - 3.25 = 8.75.

So the 12 volt case slews about three times as fast as the 6 volt
case on the rising edge. Slew rate on the falling edge is the
same at 6 or 12, this is not affected by the zener.

My vote's for including the zener.
Mostly because it gives such a pretty envelope at 12v,
and in spite of the slowing of the rising edge at 6v.
But a lot of the value of the rig is in how simple Steve has
managed to keep it, only including features that really make
a difference. With or without the zener this is much better
than before, and there were apparently very few complaints.

My last posting of March 8 describes a mod that is still an option,
is very easy to do, and gives results almost as good as anything
descibed above. If you operate at over 10v, and if you don't
want to mess with it much, you should at least consider this:

>Removed the two 0.1uF caps at C42, C43 (C53, C54 on ATS3)
>Added two 0.01uF caps from drain to gate at Q4 (Q5 on ATS3)
>Added a 100k resistor across C45 (C56 on ATS3)

The drain of Q4 is the center pin and the big tab, connected to L3.
The two 0.01uF caps (or one 0.02uF cap) could be wire leaded, they
get soldered directly to Q4, which is very mechanically stable.
Just be sure you have the right value, a 0.1uF cap will not work.
The resistor (could be anything from 10K to 1Meg) could also be
wire leaded, perhaps soldering it from Q4's tab to a ground at
the switches. I'd advise against soldering big stuff like 1/8'th
watt resistors to chip caps and chip resistors, as they fracture
easily (and unnoticeably) under mechanical stres.

73's
Jerry Gaffke, KE7ER

--- In AT_Sprint@yahoogroups.com, "Joe Rocci" <joe@...> wrote:
> I modeled your circuit and it indeed does allow you to have near
constant rise-time as the supply varies from 6 to 12 volts, but the
fall time is still twice as fast at 6V as it is at 12V. I posted the
Spice result in my ATS-3A Keying Mods folder.

1113. Re: ATS3/ATS3A Keying Envelope Fix

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-11 00:40:34 UTC
From: jgaffke
Topic: 1053 Message: 1113

Alright Joe, those plots really look nice!
From what I saw on my scope the evening of March 8,
that's pretty much what the RF envelope will look like.

Here's how I would go about the mods. I won't get to this
till sometime next week, perhaps someone else would like
to do the honors:

##################################
Mods for ATS3A keyclick fix, not yet tried.

The new parts you will need before starting are:
C101: 0.01uF SM0805 chip cap (I'd get two, just in case)
R13: 1K SM0805 chip resistor (R14 on ATS3)
R14: 10K SM0805 chip resistor (R15 on ATS3)
R101: 100K SM0805 chip resistor (may change, perhaps to 150K)
R102: 100K SM0805 chip resistor (non critical, 10K to 1Meg)
D101: 6.8volt@5ma Zener, S-Mini, MAZ80680MLCT (may change)
A small piece of mylar tape (there are alternatives)

First, do the mods of March 8, but adding only one 0.01uF cap.

Remove the two 0.1uF caps at C42, C43 (C53, C54 on ATS3)
Add a 0.01uF cap from drain to gate at Q4 (Q5 on ATS3)
Add a 100k resistor across C45 (C56 on ATS3)

Removing the old caps is easily done using two soldering irons.
The 0.01uF cap gets added right on top of Q4's leads, the drain is
the middle pin and the gate is that top outside pin connected to R13.
You might want to not add this cap till after the R13, R14 step.

The 100K resistor across C45 is non-critical, could be 10K to 1Meg,
and is there to keep Q4 leakage from charging up C45 when Q4 is off.

You could stop now, if you add another 0.01 uF cap in parallel
with the one you just put down. The rig should work fine,
and the rest gives results that are small potatoes in comparison.

Remove R13 and R14 (R14 and R15 on the ATS3)
Clean off the pads with solder wick. Wash the area, then put
a bit of mylar tape over those center pads of R13 and R14 that
connect to Q4's gate.

This is a critical high impedance node. The tape must withstand
soldering temperatures, and not absorb moisture. Could use teflon
tape if thats available. Maybe masking tape in a pinch. Other
alternatives would be to "tent" R13 and R14 up in the air over

that middle node, or to cut the copper trace leading to Q4's gate.

Replace R13 with 1K (R14 on the ATS3)
Replace R14 with 10K (R15 on the ATS3)
Add the zener across R14. (across R15 on ATS3)

The zener's end with a bar should be on the end of R14 that
is not connected to R13.

Add a 100K resistor between Q4's gate and the node
joining R14 and R13. (Q5, R15, and R14 on ATS3)

Wash the board, trying not to get water into the switches or
trimmer caps. Dry thoroughly.

##########
Adjusting D101 and R101:

Determine what zener voltage gives the best symmetry at 12 volts.
This depends on actual NDT2955 Vgs characteristics, a higher zener
voltage gives faster fall times. Could fake various zener values
with a string of LED's and signal diodes, remember these would be
pointed in the direction opposite that of the zener. Or just
leave the zener out for now till someone else figures which one
works best.

Then trim the 100K at R101 for the desired rising edge at 12v.
My guess is that we want slower edges, so maybe out around 150K.
But rigs with current firmware shut down the DDS drive to U8
around 7.75 ms after key down. We must guarantee that the envelope
has fallen to zero by then, and 100K is a safe choice in this regard.

##########################

A significant hack, but a lot easier than the initial build was.
If a few people try it and are happy, and if there is interest,
perhaps we could do some kind of group kit.
Probably about a dollar's worth of parts in moderate volumes.

Would be nice if a bunch of us could try this out before Steve
has to decide which way to go on his buy for hundreds of parts.
There may be part variation issues we don't see coming.

In my previous post, a minor error to correct:
>On the rising edge we drive R101 at V+, which is always 3.25 volts
>above the transition region. Hence, things are not balanced at 6v.
That would be the falling edge.

73's
Jerry Gaffke, KE7ER

--- In AT_Sprint@yahoogroups.com, "Joe Rocci" <joe@...> wrote:
> I posted them in my mods folder. File names are Case 4 and Case 5

> Joe W3JDR

1114. Re: [AT_Sprint] Re: ATS3/ATS3A Keying Envelope Fix

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-11 00:50:09 UTC
From: Joe Rocci
Topic: 1053 Message: 1114

Anyone who attempts this should reference Jerry's revised keying circuit schematic in his Files folder, since the part designators on his schematic are not the same as in the ATS-3A (if I recall - I don't have it here available to me)

Joe

----- Original Message -----
From: jgaffke
To: AT_Sprint@yahoogroups.com
Sent: Saturday, March 10, 2007 7:40 PM
Subject: [AT_Sprint] Re: ATS3/ATS3A Keying Envelope Fix

Alright Joe, those plots really look nice!
From what I saw on my scope the evening of March 8,
that's pretty much what the RF envelope will look like.

Here's how I would go about the mods. I won't get to this
till sometime next week, perhaps someone else would like
to do the honors:

##################################
Mods for ATS3A keyclick fix, not yet tried.

The new parts you will need before starting are:
C101: 0.01uF SM0805 chip cap (I'd get two, just in case)
R13: 1K SM0805 chip resistor (R14 on ATS3)
R14: 10K SM0805 chip resistor (R15 on ATS3)
R101: 100K SM0805 chip resistor (may change, perhaps to 150K)
R102: 100K SM0805 chip resistor (non critical, 10K to 1Meg)
D101: 6.8volt@5ma Zener, S-Mini, MAZ80680MLCT (may change)
A small piece of mylar tape (there are alternatives)

First, do the mods of March 8, but adding only one 0.01uF cap.

Remove the two 0.1uF caps at C42, C43 (C53, C54 on ATS3)
Add a 0.01uF cap from drain to gate at Q4 (Q5 on ATS3)
Add a 100k resistor across C45 (C56 on ATS3)

Removing the old caps is easily done using two soldering irons.
The 0.01uF cap gets added right on top of Q4's leads, the drain is
the middle pin and the gate is that top outside pin connected to R13.
You might want to not add this cap till after the R13, R14 step.

The 100K resistor across C45 is non-critical, could be 10K to 1Meg,
and is there to keep Q4 leakage from charging up C45 when Q4 is off.

You could stop now, if you add another 0.01 uF cap in parallel
with the one you just put down. The rig should work fine,

and the rest gives results that are small potatoes in comparison.

Remove R13 and R14 (R14 and R15 on the ATS3)
Clean off the pads with solder wick. Wash the area, then put
a bit of mylar tape over those center pads of R13 and R14 that
connect to Q4's gate.

This is a critical high impedance node. The tape must withstand
soldering temperatures, and not absorb moisture. Could use teflon
tape if thats available. Maybe masking tape in a pinch. Other
alternatives would be to "tent" R13 and R14 up in the air over
that middle node, or to cut the copper trace leading to Q4's gate.

Replace R13 with 1K (R14 on the ATS3)
Replace R14 with 10K (R15 on the ATS3)
Add the zener across R14. (across R15 on ATS3)

The zener's end with a bar should be on the end of R14 that
is not connected to R13.

Add a 100K resistor between Q4's gate and the node
joining R14 and R13. (Q5, R15, and R14 on ATS3)

Wash the board, trying not to get water into the switches or
trimmer caps. Dry thoroughly.

##########
Adjusting D101 and R101:

Determine what zener voltage gives the best symmetry at 12 volts.
This depends on actual NDT2955 Vgs characteristics, a higher zener
voltage gives faster fall times. Could fake various zener values
with a string of LED's and signal diodes, remember these would be
pointed in the direction opposite that of the zener. Or just
leave the zener out for now till someone else figures which one
works best.

Then trim the 100K at R101 for the desired rising edge at 12v.
My guess is that we want slower edges, so maybe out around 150K.
But rigs with current firmware shut down the DDS drive to U8
around 7.75 ms after key down. We must guarantee that the envelope
has fallen to zero by then, and 100K is a safe choice in this regard.

##############################

A significant hack, but a lot easier than the initial build was.
If a few people try it and are happy, and if there is interest,
perhaps we could do some kind of group kit.
Probably about a dollar's worth of parts in moderate volumes.

Would be nice if a bunch of us could try this out before Steve
has to decide which way to go on his buy for hundreds of parts.
There may be part variation issues we don't see coming.

In my previous post, a minor error to correct:
>On the rising edge we drive R101 at V+, which is always 3.25 volts
>above the transition region. Hence, things are not balanced at 6v.
That would be the falling edge.

73's
Jerry Gaffke, KE7ER

--- In AT_Sprint@yahoogroups.com, "Joe Rocci" <joe@...> wrote:
> I posted them in my mods folder. File names are Case 4 and Case 5
> Joe W3JDR

1115. Re: ATS3/ATS3A Keying Envelope Fix

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-11 04:17:36 UTC
From: jgaffke
Topic: 1053 Message: 1115

All new parts have reference designators of x101 and beyond.
Old parts should be as they were on the ATS3A
Let me know of any errors.
Jerry

--- In AT_Sprint@yahoogroups.com, "Joe Rocci" <joe@...> wrote:
> Anyone who attempts this should reference Jerry's revised keying circuit schematic in his Files folder, since the part designators on his schematic are not the same as in the ATS-3A (if I recall - I don't have it here available to me)

1116. Re: [AT_Sprint] Re: ATS3/ATS3A Keying Envelope Fix

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-11 12:18:25 UTC
From: Joe Rocci
Topic: 1053 Message: 1116

Jerry,

I just posted "Case 6", with yet another circuit topology and simulation

Joe
W3JDR

----- Original Message -----
From: jgaffke
To: AT_Sprint@yahoogroups.com
Sent: Saturday, March 10, 2007 8:40 PM
Subject: [AT_Sprint] Re: ATS3/ATS3A Keying Envelope Fix

Alright Joe, those plots really look nice!
From what I saw on my scope the evening of March 8,
that's pretty much what the RF envelope will look like.

Here's how I would go about the mods. I won't get to this
till sometime next week, perhaps someone else would like
to do the honors:

##################################
Mods for ATS3A keyclick fix, not yet tried.

The new parts you will need before starting are:
C101: 0.01uF SM0805 chip cap (I'd get two, just in case)
R13: 1K SM0805 chip resistor (R14 on ATS3)
R14: 10K SM0805 chip resistor (R15 on ATS3)
R101: 100K SM0805 chip resistor (may change, perhaps to 150K)
R102: 100K SM0805 chip resistor (non critical, 10K to 1Meg)
D101: 6.8volt@5ma Zener, S-Mini, MAZ80680MLCT (may change)
A small piece of mylar tape (there are alternatives)

First, do the mods of March 8, but adding only one 0.01uF cap.

Remove the two 0.1uF caps at C42, C43 (C53, C54 on ATS3)
Add a 0.01uF cap from drain to gate at Q4 (Q5 on ATS3)
Add a 100k resistor across C45 (C56 on ATS3)

Removing the old caps is easily done using two soldering irons.
The 0.01uF cap gets added right on top of Q4's leads, the drain is
the middle pin and the gate is that top outside pin connected to R13.
You might want to not add this cap till after the R13, R14 step.

The 100K resistor across C45 is non-critical, could be 10K to 1Meg,
and is there to keep Q4 leakage from charging up C45 when Q4 is off.

You could stop now, if you add another 0.01 uF cap in parallel
with the one you just put down. The rig should work fine,
and the rest gives results that are small potatoes in comparison.

Remove R13 and R14 (R14 and R15 on the ATS3)
Clean off the pads with solder wick. Wash the area, then put
a bit of mylar tape over those center pads of R13 and R14 that
connect to Q4's gate.

This is a critical high impedance node. The tape must withstand
soldering temperatures, and not absorb moisture. Could use teflon
tape if thats available. Maybe masking tape in a pinch. Other
alternatives would be to "tent" R13 and R14 up in the air over
that middle node, or to cut the copper trace leading to Q4's gate.

Replace R13 with 1K (R14 on the ATS3)
Replace R14 with 10K (R15 on the ATS3)
Add the zener across R14. (across R15 on ATS3)

The zener's end with a bar should be on the end of R14 that
is not connected to R13.

Add a 100K resistor between Q4's gate and the node
joining R14 and R13. (Q5, R15, and R14 on ATS3)

Wash the board, trying not to get water into the switches or
trimmer caps. Dry thoroughly.

##########
Adjusting D101 and R101:

Determine what zener voltage gives the best symmetry at 12 volts.
This depends on actual NDT2955 Vgs characteristics, a higher zener
voltage gives faster fall times. Could fake various zener values
with a string of LED's and signal diodes, remember these would be
pointed in the direction opposite that of the zener. Or just
leave the zener out for now till someone else figures which one
works best.

Then trim the 100K at R101 for the desired rising edge at 12v.
My guess is that we want slower edges, so maybe out around 150K.
But rigs with current firmware shut down the DDS drive to U8
around 7.75 ms after key down. We must guarantee that the envelope
has fallen to zero by then, and 100K is a safe choice in this regard.

##############################

A significant hack, but a lot easier than the initial build was.
If a few people try it and are happy, and if there is interest,
perhaps we could do some kind of group kit.
Probably about a dollar's worth of parts in moderate volumes.

Would be nice if a bunch of us could try this out before Steve
has to decide which way to go on his buy for hundreds of parts.

There may be part variation issues we don't see coming.

In my previous post, a minor error to correct:
>On the rising edge we drive R101 at V+, which is always 3.25 volts
>above the transition region. Hence, things are not balanced at 6v.
That would be the falling edge.

73's
Jerry Gaffke, KE7ER

--- In AT_Sprint@yahoogroups.com, "Joe Rocci" <joe@...> wrote:
> I posted them in my mods folder. File names are Case 4 and Case 5
> Joe W3JDR

1117. Re: ATS3/ATS3A Keying Envelope Fix

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-11 16:45:06 UTC
From: jgaffke
Topic: 1053 Message: 1117

Joe,

That's really curious. The rising edge of the 12v curve is not as steep as case 5.
But why? The 2N7000 is on with key down, holding the anode of D1 at gnd.
So D1 does not conduct during that rising edge, rising edge should look
just like case 5. And with key up, D1 will conduct, and the fall times should be
100k/5k = 20 times faster than in case 5.

Maybe you could take the circuit from case 6, remove D1, and run
another set of plots exactly like case 6.

Regardless, this is an interesting possibility.
We could speed up the falling edge at 12v till it's symmetrical with
the rising edge at 12v. We avoid that relatively wierd zener, though
I'd expect it to lose symmetry as we back off on the supply voltage.
On the other hand, we wouldn't lose that 0.6v of headroom when
operating at 6 volts due to the drop across that 1K in case 4.
My bets are still on the zener, but we'll see.

A minor error in my mod notes posted yesterday:
>Then trim the 100K at R101 for the desired rising edge at 12v.

That should be the falling edge. The falling edge is unaffected by the zener.
The rising edge can then be trimmed for symmetry when using a 12v supply
by choosing the correct zener. Once somebody figures out correct values
for R101 and the zener, should be able to stuff all boards the same.

I may be checking out of here most of the day.

JerryG

--- In AT_Sprint@yahoogroups.com, "Joe Rocci" <joe@...> wrote:
> I just posted "Case 6", with yet another circuit topology and simulation
> Joe W3JDR

1118. Re: [AT_Sprint] Re: ATS3/ATS3A Keying Envelope Fix

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-11 17:01:59 UTC
From: Joe Rocci
Topic: 1053 Message: 1118

Jerry,

I'm on my way out for the rest of the day too, but first a quick comment. The Case6 circuit uses a different FET. It's better behaved for this application than the IRFL9014 that I used at 9V in my transmitter. I tried to model the circuit with the NDT2955 that the ATS-3A uses, but the Spice model I got from Fairchild wouldn't run in my Catena Spice. Maybe someone else can run the sim with this device, as every sim I've done so far (except Case6) was based on the IRFL9014. There's quite a bit of variation in the gate-drain transfer function from part-type to part-type, so if we can't verify it with an accuracte sim, we might have to perfect it on the bench.

Joe
W3JDR

----- Original Message -----
From: jgaffke
To: AT_Sprint@yahoogroups.com
Sent: Sunday, March 11, 2007 12:45 PM
Subject: [AT_Sprint] Re: ATS3/ATS3A Keying Envelope Fix

Joe,

That's really curious. The rising edge of the 12v curve is not as steep as case 5.
But why? The 2N7000 is on with key down, holding the anode of D1 at gnd.
So D1 does not conduct during that rising edge, rising edge should look
just like case 5. And with key up, D1 will conduct, and the fall times should be
100k/5k = 20 times faster than in case 5.

Maybe you could take the circuit from case 6, remove D1, and run
another set of plots exactly like case 6.

Regardless, this is an interesting possibility.
We could speed up the falling edge at 12v till it's symmetrical with
the rising edge at 12v. We avoid that relatively wierd zener, though
I'd expect it to lose symmetry as we back off on the supply voltage.
On the other hand, we wouldn't lose that 0.6v of headroom when
operating at 6 volts due to the drop across that 1K in case 4.
My bets are still on the zener, but we'll see.

A minor error in my mod notes posted yesterday:
>Then trim the 100K at R101 for the desired rising edge at 12v.

That should be the falling edge. The falling edge is unaffected by the zener.
The rising edge can then be trimmed for symmetry when using a 12v supply
by choosing the correct zener. Once somebody figures out correct values
for R101 and the zener, should be able to stuff all boards the same.

I may be checking out of here most of the day.

JerryG

--- In AT_Sprint@yahoogroups.com, "Joe Rocci" <joe@...> wrote:
> I just posted "Case 6", with yet another circuit topology and simulation
> Joe W3JDR

1119. Re: Atlanticon role call

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-11 20:34:39 UTC
From: George Heron N2APB
Topic: 1089 Message: 1119

Been traveling a lot this week and just now catching up on this traffic ... we'll be posting the
Atlanticon Attendee list on the NJQRP site later tonight ... will post a link to it when ready.

Looking forward to seeing everyone at Atlanticon at the end of this month!

73, George N2APB

----- Original Message -----
From: "Kenneth Moorman" <nu4i@...>
To: <AT_Sprint@yahoogroups.com>
Sent: Friday, March 09, 2007 12:05 PM
Subject: RE: [AT_Sprint] Atlanticon role call

I plan to attend, arriving Friday afternoon. Is there a gathering place so
we can meet before dinner? I'll bring my ATS-3.

Ken, NU4I

-----Original Message-----
From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com] On Behalf
Of w1mt
Sent: Friday, March 09, 2007 10:50 AM
To: AT_Sprint@yahoogroups.com
Subject: [AT_Sprint] Atlanticon role call

I know that there are a few folks going to Atlanticon, so how bout
posting here if you plan on going.

I plan on being there with my two sons. Should be there Friday
afternoon till Sunday morning. Hope to meet a bunch of you guys there.

-mike/w1mt

1120. Re: ATS3/ATS3A Keying Envelope Fix

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-12 05:47:42 UTC
From: jgaffke
Topic: 1053 Message: 1120

Was going to spend the entire day on other things, but it's tough
to stay away from this when ideas come.

Joe, not sure why your simulation failed with the IRFL9014, got it
to work here. Saved images of schematic and the plots generated
in the KE7ER files section under case6*.

The IMRL6302 wants 5K at R3 due to it having a transition region
so near the V+ rail (Vgs of -1.5v), and because bounce in the drain
of the 2n7000 was about -0.75v. This may not be reproducible.
Using the IRFL9014, we see the same variance in rise times
with the case6 circuit as we do in case5. However, trimming for
equal rise and fall times at 9 volts in this way gives a very
good compromise.

I think the IRFL9014 is a fair match for the NDT2955, though Vgs
tends toward -4.1v rather than -3.25v. So the trouble we see in
simulations at 6 volts won't be quite that bad.

Case6 got me thinking about treating rising edges and falling edges
differently.

I've posted two new circuit diagrams and the resulting plots
in the KE7ER files folder. keyclick01 shows the constant slew
rate solution using the zener. I've adjusted it a bit to avoid
the 1K resistor that had reduced our headroom when operating
at 6 volts. Otherwise, it's the same topology as Joe's case4,
gives about the same results.

keyclick02 shows a new approach, this gives nearly constant
rise and fall times across our supply voltage range with very few
additional parts. When the key is down, C2 gets charged through
the rectifying diode to V+ minus the voltage drop across the diodes.
When the key is up, the bottom of C2 is at V+, so the top of C2
will be at twice V+ minus the drop across the diodes.
This extra voltage boost allows us to increase the key up slew
rate to match the key down slew rate.

Again, we choose a zener that gives best rising/falling symmetry
when used with the NDT2955. We scale the drive resistor(s) into
the gate (and perhaps adjust the feedback cap) for our preferred
edge rates.

No attempt has been made to retain the reference designators
from the ATS3 or ATS3A in the keyclick01 and keyclick02
schematics.

Any opinions on the desirability of constant rise/fall times
over various supply voltages? Is it worth a few parts?

73's,
Jerry Gaffke, KE7ER

1121. Re: [AT_Sprint] Re: ATS3/ATS3A Keying Envelope Fix

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-12 12:32:09 UTC
From: Joe Rocci
Topic: 1053 Message: 1121

Jerry,

My sim problem was not with the IRFL9014, it was with the NDT2955 that's used in the ATS-3A. I couldn't get the Spice library model to work in my simulator.

In any case, I think we've analyzed this thing down to what might be a 'gnat's eyebrow'. The improvements discovered so far are probably more that adequate for the needs at hand, and in many respects look better than some of the commercial rigs I've seen reviewed by QST.

Based on that, I'm going back into retirement on this subject.

Joe
W3JDR

----- Original Message -----
From: jgaffke
To: AT_Sprint@yahoogroups.com
Sent: Monday, March 12, 2007 12:47 AM
Subject: [AT_Sprint] Re: ATS3/ATS3A Keying Envelope Fix

Was going to spend the entire day on other things, but it's tough
to stay away from this when ideas come.

Joe, not sure why your simulation failed with the IRFL9014, got it
to work here. Saved images of schematic and the plots generated
in the KE7ER files section under case6*.

The IMRL6302 wants 5K at R3 due to it having a transition region
so near the V+ rail (Vgs of -1.5v), and because bounce in the drain
of the 2n7000 was about -0.75v. This may not be reproducible.
Using the IRFL9014, we see the same variance in rise times
with the case6 circuit as we do in case5. However, trimming for
equal rise and fall times at 9 volts in this way gives a very
good compromise.

I think the IRFL9014 is a fair match for the NDT2955, though Vgs
tends toward -4.1v rather than -3.25v. So the trouble we see in
simulations at 6 volts won't be quite that bad.

Case6 got me thinking about treating rising edges and falling edges
differently.

I've posted two new circuit diagrams and the resulting plots
in the KE7ER files folder. keyclick01 shows the constant slew
rate solution using the zener. I've adjusted it a bit to avoid
the 1K resistor that had reduced our headroom when operating
at 6 volts. Otherwise, it's the same topology as Joe's case4,

gives about the same results.

keyclick02 shows a new approach, this gives nearly constant
rise and fall times across our supply voltage range with very few
additional parts. When the key is down, C2 gets charged through
the rectifying diode to V+ minus the voltage drop across the diodes.
When the key is up, the bottom of C2 is at V+, so the top of C2
will be at twice V+ minus the drop across the diodes.
This extra voltage boost allows us to increase the key up slew
rate to match the key down slew rate.

Again, we choose a zener that gives best rising/falling symmetry
when used with the NDT2955. We scale the drive resistor(s) into
the gate (and perhaps adjust the feedback cap) for our preferred
edge rates.

No attempt has been made to retain the reference designators
from the ATS3 or ATS3A in the keyclick01 and keyclick02
schematics.

Any opinions on the desirability of constant rise/fall times
over various supply voltages? Is it worth a few parts?

73's,
Jerry Gaffke, KE7ER

1122. Key clicks

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-12 15:50:24 UTC
From: Steven Weber
Topic: 800 Message: 1122

Before everyone gets too obsessed with key clicks, consider this from the ARRL Handbook:

"The dots and dashes of a CW signal must start and stop abruptly enough so we can clearly distinguish the carrier's presences and absences from noise, especially when fading prevails. The Keying sidebands, which sound like little thumps when listened to on thier own, help our brains be sure when the carrier tone starts and stops.

It so happens that we always need to hear one or more harmonics of the fundamental keying waveform for the code to sound sufficently crisp. If the transmitted signal will be subjected to to propagational fadding - a safe assumption for any long-distance radio communication- we harden our keying by making the transmitter's output rise and fall more quickly. This puts more energy into the keying sidebands and makes the signal more copiable in the presense of fading - in perticualr, selective fading."

It then goes on to recommend rise and fall times of between 1 and 5 ms.

Personal thoughts:
QRP rigs should have fairly hard keying, since they are already at a power disadvantage. Stock ATS rigs do have fairly hard keying and maybe one reason so many people seem to work DX with them.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

1123. Re: Key clicks

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-12 17:00:13 UTC
From: jgaffke
Topic: 800 Message: 1123

Yup, obsessed is a good word for it.
I tend to follow something like this through just to solve
the puzzle. Then I have to back off a bit to reassess what
actually makes sense.

I'm really proud of that jack-in-the-box trick for nearly
constant rise/fall times, but there's not much point in taking
the ATS3* quite that far. It would mostly just add confusion
when kit builders have to debug their cold solder joints.

I think your post Saturday may have described the circuit
I now have in my files section under keyclick00.pdf, giving
constant slew rates. I really like the symmetry it gives,
though doing away with the zener might not make all that
much difference in real life. Hence the "you could stop here"
that I included in my hack notes.

I'm buying a selection of 5ma zeners to try it out, probably
using the circuit of keyclick01. Once it's up, I'll post
photos of the RF envelopes I see on the scope.

If you keep zapping FET's, consider a move here to Oregon.
Seldom have trouble here, even if working on carpets.
All that moss between the toes apparently helps drain the static.

73's
Jerry Gaffke, KE7ER

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
>Before everyone gets too obsessed with key clicks, consider this..

1124. Re: [AT_Sprint] Key clicks

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-12 17:23:18 UTC
From: Hank Greeb
Topic: 800 Message: 1124

Steve:

Methinks thee ? a valid point.

Put a spectrum analyzer on a typical ATS rig (or several "typical" ATS rigs) and see how wide the clicks are, and how far down (in dB) they are compared with the main signal. A KW+ rig can't have as many sidebands as a 1 or 5 watt rig, because of the 40 dB or so difference in power (is my calculation of dB difference between 1 and 1 KW correct?). To have the same "perceived" bandwidth, the KW rig would need 40 dB less sidebands as a 1 watt rig - i.e. the keying would need to be much softer.

I haven't heard a "clicky" signal on a QRP contest that I can remember - I've heard a few chirps from keyed oscillators, but no clicks. If a KW+ rig were running "hard" keying a few hundred Hz from a 1 watt signal, both coming from the same general geographical area, I'm sure I'd hear more clicks from the KW rig.

72 de n8xx HG

Steven Weber wrote:

>Before everyone gets too obsessed with key clicks, consider this from the ARRL Handbook:
>
>"The dots and dashes of a CW signal must start and stop abruptly enough so we can clearly distinguish the carrier's presences and absences from noise, especially when fading prevails. The Keying sidebands, which sound like little thumps when listened to on thier own, help our brains be sure when the carrier tone starts and stops.
>
>It so happens that we always need to hear one or more harmonics of the fundamental keying waveform for the code to sound sufficently crisp. If the transmitted signal will be subjected to to propagational fadding - a safe assumption for any long-distance radio communication- we harden our keying by making the transmitter's output rise and fall more quickly. This puts more energy into the keying sidebands and makes the signal more copiable in the presense of fading - in perticualr, selective fading."
>
>It then goes on to recommend rise and fall times of between 1 and 5 ms.
>
>Personal thoughts:
>QRP rigs should have fairly hard keying, since they are already at a power disadvantage. Stock ATS rigs do have fairly hard keying and maybe one reason so many people seem to work DX with them.
>72,
>Steve, KD1JV
>"Melt Solder"
>White Mountains of New Hampshire

>http://www.qsl.net/kd1jv/
>http://kd1jv.qrpradio.com
>

1125. Re: Key clicks

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-13 05:35:11 UTC
From: radio_kx0r
Topic: 800 Message: 1125

Steve,

I really like the quote from the ARRL Handbook you posted - I read it years ago, and believe it concisely defines the purpose of the keyed wave. It's true that a sharply-keyed wave is easier to copy through noise. The ear does hear it better. It also occupies more bandwidth.

Many years ago I lifted a cathode-keying circuit from the Handbook to use with my class-C 4 X 1625 tube amp. Over a period of time, I played with the circuit to get a better, more symmetric keying waveform. I did the same thing with two other homebrew rigs. I listened to the signals quite a bit, something that must be done very carefully to avoid overloading, AGC, etc. I think 2 ms risetime sounds nice and punchy and 5 ms sounds a bit soft. 1 ms is too harsh for me, and 10 ms is unacceptably mushy. Where we measure the start and end of the rise and fall is also quite fuzzy, because some keying waveforms aren't simple ramps; there are rounded edges and exponential decays sometimes.

I couldn't decide what I really wanted for timing, so I put a little switch on the front of my tube amp: about 2 ms for DX and noisy band conditions, and 5 ms for rag chewing when the band's nice. It's a 200 watt output rig.

The problem with the stock ATS-3A is that when it's run near 12V, there is so much delay in the fall time, that the DDS drive signal gets cut off sharply before the key shaping takes effect. It's so quick I never measured it - too quick. Jerry and/or Joe have seen this too. This is because at the higher supply voltages, the gate of Q4 ends up more negative with respect to the source that it ought to be, and it takes too long for it to come down to the point where it turns off. At 6 to 9 volts the keying is lovely, and this is no accident. I changed R13 from 22K to 56K, and got nice keying at 10-12V, but by doing that I lost the low voltage capability of the rig. I run on 3 lithium cells or 10 NiMH, or my QBSA modified to go to 12V, so I'm OK with this easy mod.

So I agree with you Steve, and if we end up with a fairly simple circuit with rise and fall times of around 2 ms over the full range of supply voltages, that would be great. I do think that the sharper waves are easier to copy through typical QRP conditions, and that is really how most people, including me, are going to use this rig.

I think it's great that this forum has lead to this much work, discussion, and understanding of how these keying circuits actually

work, and this is certainly one of the better sides of our hobby!

72/73
KX0R

>
> Before everyone gets too obsessed with key clicks, consider this
from the
> ARRL Handbook:
>
> "The dots and dashes of a CW signal must start and stop abruptly
enough so
> we can clearly distinguish the carrier's presences and absences
from noise,
> especially when fading prevails. The Keying sidebands, which sound
like
> little thumps when listened to on thier own, help our brains be
sure when
> the carrier tone starts and stops.
>
> It so happens that we always need to hear one or more harmonics of
the
> fundamental keying waveform for the code to sound sufficently
crisp. If the
> transmitted signal will be subjected to to propagational fadding -
a safe
> assumption for any long-distance radio communication- we harden our
keying
> by making the transmitter's output rise and fall more quickly. This
puts
> more energy into the keying sidebands and makes the signal more
copiable in
> the presense of fading - in perticualr, selective fading."
>
> It then goes on to recommend rise and fall times of between 1 and 5
ms.
>
> Personal thoughts:
> QRP rigs should have fairly hard keying, since they are already at
a power
> disadvantage. Stock ATS rigs do have fairly hard keying and maybe
one
> reason so many people seem to work DX with them.
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://www.qsl.net/kd1jv/
> http://kd1jv.qrpradio.com
>

1126. Re: Key clicks

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-13 14:09:55 UTC
From: jgaffke
Topic: 800 Message: 1126

I hope my zeal for finding the perfect key click filter hasn't alarmed
too many people. It may be a non issue. The only reports of trouble
I'm aware of come from those of us who have looked it over with a scope,
not from actually hearing objectionable key ckicks on the air. With a
10 volt power supply and below things look perfectly fine. You've
over reacted if you switched to using your 200 watt desktop instead.

If you do run at 12v and cringe at the thought of hard keying, the very
simple fix in post 1086 (further described in 1111) should relieve any guilt.

73's
Jerry Gaffke, KE7ER

1127. Re: Key clicks

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-13 16:42:12 UTC
From: jgaffke
Topic: 800 Message: 1127

Having reviewed my last post, a few more comments.

As Carey noted, fall times at 12 volts are more than
hard keyed, they're instantaneous. I jumped on this because
I thought it enough of an issue that it should be looked into
before the next roll in the design.

But if the only people noticing are those poking at it
with scopes, it's not something for current owners to
lose sleep over.

Jerry Gaffke, KE7ER

1128. Re: Key clicks

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-13 17:57:30 UTC
From: radio_kx0r
Topic: 800 Message: 1128

Jerry,

Did anyone do simulation plots at various voltages for the circuit you posted as keyclick00 ? That one looks reasonable and fairly easy to implement, but I can't find the graphs.

Thanks

Carey KX0R

> Having reviewed my last post, a few more comments.
>
> As Carey noted, fall times at 12 volts are more than
> hard keyed, they're instantaneous. I jumped on this because
> I thought it enough of an issue that it should be looked into
> before the next roll in the design.
>
> But if the only people noticing are those poking at it
> with scopes, it's not something for current owners to
> lose sleep over.
>
> Jerry Gaffke, KE7ER
>

1129. Re: Key clicks

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-13 18:43:39 UTC
From: jgaffke
Topic: 800 Message: 1129

Hi Carey,

In Joe's folder, his case4 plots keyclick00.
Note that he has adjusted the capacitance to 0.004uF.
I'm not 100% sure, but assume he stayed with 100K at R101.

My keyclick01 circuit (schematic and plot in my folder)
offers an improvement in the rise time at 6 volts by avoiding
the 1K drop across R13 with key down. Performance should
otherwise be virtually the same as keyclick00 given the same
R101 and C101 (I have them at 150K and 0.01uF). When I get
around to implementing this, it will probably be keyclick01.

Those part values are not final. Bringing down the 10K's
makes the slew rates agree better, but increases the current.
Adjust the zener voltage for symmetry between rising/falling
edges. Too large of a C101 will cause that FET to oscillate.

Jerry

--- In AT_Sprint@yahoogroups.com, "radio_kx0r"> wrote:
> Did anyone do simulation plots at various voltages for the circuit
you posted as keyclick00?

1130. Key Clicks

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-13 19:47:42 UTC
From: Karl Larsen
Topic: 1130 Message: 1130

I think the hard work being done to measure the magnitude of the keying on the ATS3 is really not needed. I own one of the early ATS3's and I use it for such things as Fox Hunts DX chases and just the little CW net we have in New Mexico. The power I run at is what 12 VDC provides on 40 Meters and is usually 4 Watts.

To this date I have never been told I have key clicks. Never. The little net is all friends and we do talk about keying and how the rig sounds. One member gets on with his very old rigs that are self excited tubes and such. He is hard to chase around with the ATS3 :-)

So I really don't care what the keying on and off speed is. So long as there are no complaints about key clicks I'm happy with it.

72/73 Karl K5DI

1131. Re: [AT_Sprint] Re: Key clicks

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-13 19:35:28 UTC
From: Steven Weber
Topic: 800 Message: 1131

>As Carey noted, fall times at 12 volts are more than
>hard keyed, they're instantaneous.

Well, not quite instantaneous, but pretty close to it! Of course, I had intended for the rig to be powered by 9 volts, and didn't pay as much attention as maybe I should have as to what happened at higher voltages.

Maybe I'll solve the problem by adding a 9V LDO regulator the the -B board <G>

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://www.qsl.net/kd1jv/
http://kd1jv.qrpradio.com

1132. Re: [AT_Sprint] Re: Key clicks

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-13 21:58:29 UTC
From: Kurt
Topic: 800 Message: 1132

Or I could just use an outboard regulator/battery arrangement?

Anyone try to use the unit with an outboard amp for a little
extra output? I know that defeats the purpose but if one
is going to use the Sprint with Steve's base unit, might be nice to
get a little extra power out of it without trying to push it
with 12V. Especially if running at home.

Oh, passed Tech and General test last friday the 9th. I just couldn't
get the studying and my code learn'in done in time to test under the
old rules. Am embarassed I missed 7 on the Tech test and I don't have
the slightest idea which ones. May have been due to the fact my manual
was one addition back. Doesn't matter as I did the General and just
missed 3 questions. Made me feel better. Didn't have access to an
elmer either.

Kurt Savegnago
(call pending) :-)

Steven Weber wrote:
>>As Carey noted, fall times at 12 volts are more than
>>hard keyed, they're instantaneous.
>
>
> Well, not quite instantaneous, but pretty close to it! Of course, I had
> intended for the rig to be powered by 9 volts, and didn't pay as much
> attention as maybe I should have as to what happened at higher voltages.
>
> Maybe I'll solve the problem by adding a 9V LDO regulator the the -B board <G>
>
>
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://www.qsl.net/kd1jv/
> http://kd1jv.qrpradio.com
>

1133. Re: Key clicks

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-14 03:18:15 UTC
From: jgaffke
Topic: 800 Message: 1133

Hi Steve,

The key clicks at 12v are easy enough to resolve.
And any clicks seem to be a minor issue to begin with.

Are you seeing other trouble at 12v, maybe blown finals?
Could be fixed with a line in the manual stating that the rig
is designed for 9v, and while some have reported success with
supplies from 6 to 12 volts such operation is not guaranteed.

It's a big win to be able to operate over such a range, as it
allows us to pick our output power.

A regulator would add an extra margin of safety though, and the
kit builder could choose to not stuff it or to substitute a 12v.

73's
Jerry Gaffke, KE7ER

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
>Of course, I had intended for the rig to be powered by 9 volts,
>and didn't pay as much attention as maybe I should have as to
>what happened at higher voltages.
>Maybe I'll solve the problem by adding a 9V LDO regulator the
>the -B board

1134. Re: Key clicks

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-14 03:47:44 UTC
From: dave
Topic: 800 Message: 1134

I'm not sure I buy into the argument that clicks help us hear CW. If the signal is weak, the clicks will be below the noise level and we'll not hear them at all. If the signal is strong, we don't need the clicks to help us.

Clicks are really just broadband noise that is generated by the rise and/or fall time of the CW envelope. This extends well out from the carrier but the level falls off rather rapidly. It is at least several dB below the carrier even a kHz or 2 away.

In some listening tests I've done, once a signal gets to the point where it is weak enough to be hard to copy, a further weakening by 20 dB makes it below the noise level. Since clicks are this far below the carrier, I don't think we can hear clicks on weak signals.

On a QRP rig you could probably get away with clicks at -20 dBc. On a 5w signal there would be about 50 mW of energy in the clicks. Doubt that you'd get many complaints from that. Similar clicks on a KW rig would have about 10w of energy. I think I've heard some of those.

We only hear clicks on *loud* signals. They are quite annoying. I'm in the camp that says "The fewer clicks, the better."

FWIW, EMRFD says rise and fall times should be 1 to 2 ms. They even show a recommended wave shape on page 6.64.

I am also of the opinion that clicks fall under the FCC's definition of spurious signals. They need to be below the 'legal limit.' Can't recall what that is right now but think it is -43 dBc?

73 de dave
ab9ca

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
>
> Before everyone gets too obsessed with key clicks, consider this from the
> ARRL Handbook:
>
> "The dots and dashes of a CW signal must start and stop abruptly enough so
> we can clearly distinguish the carrier's presences and absences from noise,
> especially when fading prevails. The Keying sidebands, which sound like
> little thumps when listened to on thier own, help our brains be sure when
> the carrier tone starts and stops.

>
> It so happens that we always need to hear one or more harmonics of the
> fundamental keying waveform for the code to sound sufficently crisp.
If the
> transmitted signal will be subjected to to propagational fadding - a
safe
> assumption for any long-distance radio communication- we harden our
keying
> by making the transmitter's output rise and fall more quickly. This puts
> more energy into the keying sidebands and makes the signal more
copiable in
> the presense of fading - in perticualr, selective fading."
>
> It then goes on to recommend rise and fall times of between 1 and 5 ms.
>
> Personal thoughts:
> QRP rigs should have fairly hard keying, since they are already at a
power
> disadvantage. Stock ATS rigs do have fairly hard keying and maybe one
> reason so many people seem to work DX with them.
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://www.qsl.net/kd1jv/
> http://kd1jv.qrpradio.com
>

1135. Re: [AT_Sprint] Re: Key clicks

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-14 06:49:56 UTC
From: Vojtěch Bubník
Topic: 800 Message: 1135

Let me compare PSK31 signal with CW. The amplitude envelope of a PSK31 signal is designed to suppres effectively any keying sidebands. The two sidebands of an idle BPSK31 signal that are visible on the waterfall are caused only by phase modulation.

If a CW signal of the same dot length 1/31.25s is shaped with the same envelope as BPSK31 signal, the human brain will have great trouble to read it. Some of the sidebands aka key clicks are nescessary. Those keyclicks that span outside the other's receive filter do not contribute to readability, they only bother others. So the ideal CW envelope for QRP would produce little attenuated sidebands say from -150 to +150Hz and attenuate the rest.

Well, it is not that easy, human ears are unconfortable with too sharp envelope.

> I'm not sure I buy into the argument that clicks help us hear CW.
If you have some software able to produce throb digital signal, listen to it. The signal is 1 to 4 symbols per second and shaped by the same envelope as BPSK31, which is raised cosine. You will hear how fuzzy it sounds.

73, Vojtech OK1IAK

1136. Re: Key clicks

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-14 15:48:36 UTC
From: dave
Topic: 800 Message: 1136

> If a CW signal of the same dot length 1/31.25s is shaped with the
same envelope as BPSK31 signal, the human brain will have great
trouble to read it.

I'm not sure I buy into this argument either. Remember that in CW all
we are detecting is the presence or absence of signal. As I tune the
bands I have no trouble detecting the presence of a PSK31 signal, even
a weak one. It is easily identified by its unique sound.

> If you have some software able to produce throb digital signal,
listen to it.

I'm not sure what a 'throb digital signal' is. Don't think I have any
software like that.

And note that when others have adjusted the rise/fall time to be about
5 ms they did not say they had trouble detecting it. Only that it
sounded mushy. I have no doubt that a crisp edge does make the signal
easier on the ears. But the signal has to be fairly strong to hear
those edges.

With weak signals - the selective fading mentioned in the ARRL passage
- the even weaker sidebands cannot be heard, all we are hearing is the
steady state tone. Perhaps this is one reason so many hams seem to
have trouble hearing weak stations.

73 de dave
ab9ca

--- In AT_Sprint@yahoogroups.com, Vojtìch Bubník <bubnikv@...> wrote:
>
> Let me compare PSK31 signal with CW. The amplitude envelope of a
PSK31 signal is designed to suppres effectively any keying sidebands.
The two sidebands of an idle BPSK31 signal that are visible on the
waterfall are caused only by phase modulation.
>
> If a CW signal of the same dot length 1/31.25s is shaped with the
same envelope as BPSK31 signal, the human brain will have great
trouble to read it. Some of the sidebands aka key clicks are
nescessary. Those keyclicks that span outside the other's receive
filter do not contribute to readability, they only bother others. So
the ideal CW envelope for QRP would produce little attenuated
sidebands say from -150 to +150Hz and attenuate the rest.
>
> Well, it is not that easy, human ears are unconfortable with too
sharp envelope.
>

> > I'm not sure I buy into the argument that clicks help us hear CW.
> If you have some software able to produce throb digital signal,
listen to it. The signal is 1 to 4 symbols per second and shaped by
the same envelope as BPSK31, which is raised cosine. You will hear how
fuzzy it sounds.
>
> 73, Vojtech OK1IAK
>

1137. March RFTB Announcement

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-18 00:51:07 UTC
From: Larry Makoski
Topic: 1137 Message: 1137

This Sunday evening, the Flying Pigs Amateur Radio Club International will be holding its monthly Run For The Bacon. This is a friendly, two hour QRP CW Sprint, which is open to ALL radio amateurs, will last from 9:00 - 11:00PM EDT (0100-0300 UTC Monday).

You may work stations once per band on 160, 80, 40, 20, 15 or 10 Meters. Suggested starting frequencies are 1.812, 3.562, 7.044, 14.062, 21.062, and 28.062 MHz.

The exchange is RST, S/P/C (State, Province, Country) and Flying Pigs membership number. If you're not a member of the Flying Pigs, and would like to be; then please click on the "membership" hyperlink on .http://www.gentzow.com/fpqrp/ Otherwise, non-members can just use their output power figure.

You can report your score via the Autolog page which can be found at :
http://gentzow.com/fpqrp/autolog.asp
or you can mail your logs to the address given on the Autolog page. The deadline for logs is March 25th at 2400 UTC.

Hope to catch you on the air Sunday evening!

72 es "oo"
Larry W2LJ FP#612

--
73 de Larry W2LJ
QRP - When you care to use the very least!

http://www.w2lj.qrpradio.com
http://w2lj.blogspot.com/

1138. Re: March RFTB Announcement

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-18 03:31:46 UTC
From: radio_kx0r
Topic: 1137 Message: 1138

I wonder if now that we're on daylight time, since the Run for the Bacon starts effectively an hour earlier (relative to the sun and the ionosphere), 20 meters will be worth trying at the start?

I hope some of you try 20M - it's near sunset here at the start of this event, so at least the western half of the country may have some decent activity, at least for part of the Run. 15 meters?? Perhaps.

The time shift should help compensate with the increasing noise and QRN on 80M.

I may try the ATS3A this time.

OO
KX0R
>
> This Sunday evening, the Flying Pigs Amateur Radio Club International
> will be holding its monthly Run For The Bacon. This is a friendly, two
> hour QRP CW Sprint, which is open to ALL radio amateurs, will last from
> 9:00 - 11:00PM EDT (0100-0300 UTC Monday).
>
> You may work stations once per band on 160, 80, 40, 20, 15 or 10
> Meters. Suggested starting frequencies are 1.812, 3.562, 7.044, 14.062,
> 21.062, and 28.062 MHz.
>
> The exchange is RST, S/P/C (State, Province, Country) and Flying Pigs
> membership number. If you're not a member of the Flying Pigs, and would
> like to be; then please click on the "membership" hyperlink on
> .http://www.gentzow.com/fpqrp/ Otherwise, non-members can just use
> their output power figure.
>
> You can report your score via the Autolog page which can be found at :
> http://gentzow.com/fpqrp/autolog.asp
> or you can mail your logs to the address given on the Autolog page. The
> deadline for logs is March 25th at 2400 UTC.
>
> Hope to catch you on the air Sunday evening!

>
> 72 es "oo"
> Larry W2LJ FP#612
>
> --
> 73 de Larry W2LJ
> QRP - When you care to use the very least!
>
> http://www.w2lj.qrpradio.com
> http://w2lj.blogspot.com/
>

1139. SMD soldering

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-18 17:32:31 UTC
From: Karl Larsen
Topic: 1139 Message: 1139

I bought all the things you need to use the method of sticking all the parts on the front side of the ATS board with solder laden paste. This is the hard part. Then you pre-heat the board for a couple of minutes and then heat it to 350 F for about 30 seconds until all the paste turns to solder and all 100 devices are soldered properly at once.

I am using the Cash Olson method and I made one test board and it looks just great! You can read about Cash's method at:

http://www.zianet.com/erg/SMT_Soldering.html

and I got the embossing heat tool from Hobby Lobby and a one burner stove with a thermostat from Wal Mart and had an old pot. All this cost $20.00 I bought a syringe with solder paste for $5.00 from Cash and the kit I built to practise with cost $10.00.

With an investment of $35.00 I now know that I, a 6'4" 71 year old man can do this! And it is so much faster and safer than soldering each device by hand. I will buy the new ATS3B kit and expect to have all the surface mount devices mounted the first day.

72/73 Karl K5DI

1140. New QBSA problem ?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-18 21:11:11 UTC
From: bantonides
Topic: 1140 Message: 1140

I have been using my QBSA for some time time now with no problems at all.

This morning I was working on 80 meters, all ok. I left the station for about an hour and left everything powered on. When I returned, the freq display was jumping around at random. I checked cables and swapped cables, all were good. I tried other band modules and found all were doing the same thing except the 40 meter module. It was dead on as usual.

The ATS 3 is working fine on all bands. The CW Freq readout is right on, as I checked this using my general coverage rcvr while xmiting into a dummy load on all bands. The ATS changes freqs ok as well.

The fwd & rev pwr functions of the QSBA also seem to be fine.

... Svereal hours later ...

All equipment has been powered off for several hours. Now all bands display frequency that is about 5KHz too low, except for 40 mtrs which is still dead accurate.

Mode switch now does not function. The display is stuck in the KHz display mode.

Has anyone seen this kind of behavior before? All suggestions/ideas appreciated.

TNX
Bart, N9AKF

1141. Run for the Bacon, 3/18/2007, 6:00 pm

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-19 00:48:43 UTC
From: AT_Sprint@yahoogroups.com
Topic: 1141 Message: 1141

Reminder from: AT_Sprint Yahoo! Group
http://groups.yahoo.com/group/AT_Sprint/cal

Run for the Bacon
Sunday March 18, 2007
6:00 pm - 8:00 pm
(This event repeats every month on the third Sunday.)
Location: Your shack or anywhere

Notes:
This Sunday evening, the Flying Pigs Amateur Radio Club International will be holding its monthly Run For The Bacon. This is a friendly, two hour QRP CW Sprint, which is open to ALL radio amateurs, will last from 9:00 - 11:00PM EDT (0200-0400 UTC Monday).

You may work stations once per band on 160, 80, 40, 20, 15 or 10 Meters. Suggested starting frequencies are 1.812, 3.562, 7.044, 14.062, 21.062, and 28.062 MHz.

The exchange is RST, S/P/C (State, Province, Country) and Flying Pigs membership number. If you're not a member of the Flying Pigs, and would like to be; then please cli

All Rights Reserved
Copyright ? 2007
Yahoo! Inc.
http://www.yahoo.com

Privacy Policy:
http://privacy.yahoo.com/privacy/us

Terms of Service:
http://docs.yahoo.com/info/terms/

1142. March NAQCC Sprint

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-20 02:30:26 UTC
From: Larry Makoski
Topic: 1142 Message: 1142

This Wednesday evening, the North American QRP CW Club will be holding its monthly sprint.

Here are the particulars:

Date and time:
Thursday, March 22nd, 0030-0230 UTC
(Remember that's Wednesday evening here in the USA) That's 8:30 - 10:30 EDT, 7:30 - 9:30 CDT, 6:30 - 8:30 MDT and 5:30 - 7:30 PDT.

Bands - Frequencies:
80M - 3555-3565 kHz (Be courteous to FISTS operating on 3558 kHz)
40M - 7039-7050 kHz (Avoid W1AW on 7047.5 kHz).
20M - 14059-14065 kHz. General:
A particular station may be worked once on each band. Operate CW only. All licensed amateurs are invited to participate, but only those operating QRP (5 watts or less) are eligible for awards.

Call: CQ NA

Exchange:
RST - SPC (State Province or Country) - NAQCC Nr.
(non-Members substitute power level for NAQCC Nr., e.g. 5W, 1W, etc. Be sure to add the W.)

QSO Points:
QSO with a Member, 2 points.
QSO with a Non-member, 1 point.

Multipliers:
Each USA state
Each VE province
Each country except W/VE
All multipliers count only once in the contest.

Bonus:
If you use only a straight key for the entire sprint, multiply your score by 2.
If you use only a bug for the entire sprint, multiply your score by 1.5.
If you key with anything other than a straight key or bug, there is no bonus multiplier.

Categories:
SWA - simple wire antennas - for those using a simple wire antenna per NAQCC definition.
GAIN - gain antennas - for those using other than a simple wire antenna.

Special Award:
For the one making the highest score using an indoor antenna. At least
1/2 of the radiating portion of the antenna must be indoors.

Entry Deadline:
All entries must be RECEIVED before 2400Z on March 28, 2007. So submit
as soon as possible, especially regular mail entries.

For further information, please visit:
http://www.arm-tek.net/~yoel//sprintrules.html
To join the NAQCC, please visit: http://www.arm-tek.net/~yoel//joinup.html

73 de Larry W2LJ
NAQCC #35

--
73 de Larry W2LJ
QRP - When you care to use the very least!

http://www.w2lj.qrpradio.com
http://w2lj.blogspot.com/

1143. Power Supply

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-22 09:35:34 UTC
From: Kurt
Topic: 1143 Message: 1143

Hi,

Would a regulated 0-18V 0-3amp power supply be decent enough to run
the ATS-3A and QBSA units? Got my call yesterday. KC9LDH.
I could select 10V and be "regulated" too.

Kurt Savegnago

1144. Re: [AT_Sprint] Power Supply

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-22 14:57:21 UTC
From: Michael Harnage
Topic: 1143 Message: 1144

It should work fine. Personally, I would choose a
fixed voltage supply so that there would be no way to
accidentally put more than 12 volts to the rig.

Congrats on the new call!

-mike/w1mt

--- Kurt <ksaves2@...> wrote:

> Hi,
>
> Would a regulated 0-18V 0-3amp power supply be
> decent enough to run
> the ATS-3A and QBSA units? Got my call yesterday.
> KC9LDH.
> I could select 10V and be "regulated" too.
>
> Kurt Savegnago
>
>

Bored stiff? Loosen up...
Download and play hundreds of games for free on Yahoo! Games.
http://games.yahoo.com/games/front

1145. Re: [AT_Sprint] Power Supply

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-22 13:00:16 UTC
From: Kurt
Topic: 1143 Message: 1145

Thanks,

I'll be careful. I wonder if anyone has used an amplifier with the ATS-3/3A? I do have a Ramsey Qamp-40, 40 meter unit that I plugged into a Peanut Whistle and it seemed to work fine into my Oak Hills Dummy load. (I was unlicensed at the time so all my working with equipment was through the dummy load and would listen on shortwave on the bench) I am located in an area where using true QRP to start out would not be advantageous. A little extra power might increase the odds of a contact in the beginning. I'm so isolated, I couldn't even get a response off of a good 2 meter repeater at 1700h local time, 1 mile from my house with a 5 watt H/T.:-) Weekends will be better there.

Kurt Savegnago
KC9LDH

Michael Harnage wrote:
> It should work fine. Personally, I would choose a
> fixed voltage supply so that there would be no way to
> accidentally put more than 12 volts to the rig.
>
> Congrats on the new call!
>
> -mike/w1mt
>
> --- Kurt <ksaves2@...> wrote:
>
>
>>Hi,
>>
>> Would a regulated 0-18V 0-3amp power supply be
>>decent enough to run
>>the ATS-3A and QBSA units? Got my call yesterday.
>>KC9LDH.
>>I could select 10V and be "regulated" too.
>>
>> Kurt Savegnago
>>
>>
>
>
>
>
> _____
> Bored stiff? Loosen up...
> Download and play hundreds of games for free on Yahoo! Games.

> http://games.yahoo.com/games/front
>
>
>
> Yahoo! Groups Links
>
>
>
>

1146. Re: [AT_Sprint] Power Supply

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-22 18:53:15 UTC
From: Bill Noyce
Topic: 1143 Message: 1146

I sometimes use an HFPacker Amp with the ATS-3, but it's usually not
needed for what I want to accomplish. "Isolated" in HF terms is
measured in thousands of miles, so you may find you don't have trouble
making contacts as long as you have a half-decent antenna (namely, a
long enough piece of wire).
-- Bill, AB1AV

On 3/22/07, Kurt <ksaves2@...> wrote:
>
>
>
>
>
>
> Thanks,
>
> I'll be careful. I wonder if anyone has used an amplifier with the
> ATS-3/3A? I do have a Ramsey Qamp-40, 40 meter unit that I plugged into
> a Peanut Whistle and it seemed to work fine into my Oak Hills Dummy
> load. (I was unlicensed at the time so all my working with equipment
> was through the dummy load and would listen on shortwave on the bench)
> I am located in an area where using true QRP to start out would not be
> advantageous. A little extra power might increase the odds of a contact
> in the beginning. I'm so isolated, I couldn't even get a response off
> of a good 2 meter repeater at 1700h local time, 1 mile from my house
> with a 5 watt H/T.:-) Weekends will be better there.
>
> Kurt Savegnago
> KC9LDH
>
> Michael Harnage wrote:
> > It should work fine. Personally, I would choose a
> > fixed voltage supply so that there would be no way to
> > accidentally put more than 12 volts to the rig.
> >
> > Congrats on the new call!
> >
> > -mike/w1mt
> >
> > --- Kurt <ksaves2@...> wrote:
> >
> >
> >>Hi,
> >>
> >> Would a regulated 0-18V 0-3amp power supply be

> >>decent enough to run
> >>the ATS-3A and QBSA units? Got my call yesterday.
> >>KC9LDH.
> >>I could select 10V and be "regulated" too.
> >>
> >> Kurt Savegnago
> >>
> >>
> >
> >
> >
> >
> > _____
> > Bored stiff? Loosen up...
> > Download and play hundreds of games for free on Yahoo! Games.
> > http://games.yahoo.com/games/front
> >
> >
> >
> > Yahoo! Groups Links
> >
> >
> >
> >
>
>

1147. Re: [AT_Sprint] Power Supply

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-22 15:01:30 UTC
From: Kurt
Topic: 1143 Message: 1147

Thanks for the info on the HF Packer Amp. The little 35 watt job looks
right up my alley. The 100 watt looks cool but $400.00 is a bit stiff
for me right now.

Kurt

Bill Noyce wrote:
> I sometimes use an HFPacker Amp with the ATS-3, but it's usually not
> needed for what I want to accomplish. "Isolated" in HF terms is
> measured in thousands of miles, so you may find you don't have trouble
> making contacts as long as you have a half-decent antenna (namely, a
> long enough piece of wire).
> -- Bill, AB1AV
>
> On 3/22/07, Kurt <ksaves2@...> wrote:
>
>>
>>
>>
>>
>>
>>Thanks,
>>
>> I'll be careful. I wonder if anyone has used an amplifier with the
>> ATS-3/3A? I do have a Ramsey Qamp-40, 40 meter unit that I plugged into
>> a Peanut Whistle and it seemed to work fine into my Oak Hills Dummy
>> load. (I was unlicensed at the time so all my working with equipment
>> was through the dummy load and would listen on shortwave on the bench)
>> I am located in an area where using true QRP to start out would not be
>> advantageous. A little extra power might increase the odds of a contact
>> in the beginning. I'm so isolated, I couldn't even get a response off
>> of a good 2 meter repeater at 1700h local time, 1 mile from my house
>> with a 5 watt H/T.:-) Weekends will be better there.
>>
>> Kurt Savegnago
>> KC9LDH
>>
>> Michael Harnage wrote:
>> > It should work fine. Personally, I would choose a
>> > fixed voltage supply so that there would be no way to
>> > accidentally put more than 12 volts to the rig.
>> >
>> > Congrats on the new call!
>> >
>> > -mike/w1mt

>> >
>> > --- Kurt <ksaves2@...> wrote:
>> >
>> >
>> >>Hi,
>> >>
>> >> Would a regulated 0-18V 0-3amp power supply be
>> >>decent enough to run
>> >>the ATS-3A and QBSA units? Got my call yesterday.
>> >>KC9LDH.
>> >>I could select 10V and be "regulated" too.
>> >>

1148. Re: [AT_Sprint] Power Supply

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-22 23:47:14 UTC
From: Rick Bennett
Topic: 1143 Message: 1148

I also have a 35 Watt HF packer amp, but it is not completely?built yet.? Yet another project that got put on the back burner.?

?

One issue that came up was the input attenuator resistors for the Amp.? I originally bought some big resistors that barely fit?so that I could run the ATS-3 into the amp at 12v/full power operation.? Then it dawned on me that I could just reduce the voltage to the ATS-3, keep the input power down and use smaller attenuator resistors (I am not always the sharpest tack in the box).? Since the ATS-3 is really just an "exciter" in this case, there is no reason to run it at full power.? In addition, I also?plan to use this Amp with my Sierra which only puts out about 2 watts.

?

Anyway, In my humble opinion, 35 watts is good enough, and the 35 watt amp is very compact.? I don't know the current going rate for the HF Packer amp, but it is a very good buy.

?

de kc0pet, Rick

?

?

-----Original Message-----
From: Kurt
Sent: Mar 22, 2007 10:01 AM
To: AT_Sprint@yahoogroups.com
Subject: Re: [AT_Sprint] Power Supply

Thanks for the info on the HF Packer Amp. The little 35 watt job looks
right up my alley. The 100 watt looks cool but $400.00 is a bit stiff
for me right now.

Kurt

Bill Noyce wrote:
> I sometimes use an HFPacker Amp with the ATS-3, but it's usually not
> needed for what I want to accomplish. "Isolated" in HF terms is
> measured in thousands of miles, so you may find you don't have trouble
> making contacts as long as you have a half-decent antenna (namely, a
> long enough piece of wire).
> -- Bill, AB1AV
>
> On 3/22/07, Kurt <ksaves2@sbcglobal.net> wrote:

>
>>
>>
>>
>>
>>
>>Thanks,
>>
>> I'll be careful. I wonder if anyone has used an amplifier with the
>> ATS-3/3A? I do have a Ramsey Qamp-40, 40 meter unit that I plugged into
>> a Peanut Whistle and it seemed to work fine into my Oak Hills Dummy
>> load. (I was unlicensed at the time so all my working with equipment
>> was through the dummy load and would listen on shortwave on the bench)
>> I am located in an area where using true QRP to start out would not be
>> advantageous. A little extra power might increase the odds of a contact
>> in the beginning. I'm so isolated, I couldn't even get a response off
>;> of a good 2 meter repeater at 1700h local time, 1 mile from my house
>> with a 5 watt H/T.:-) Weekends will be better there.
>>;
>> Kurt Savegnago
>> KC9LDH
>>
>> Michael Harnage wrote:
>> > It should work fine. Personally, I would choose a
>> > fixed voltage supply so that there would be no way to
>> > accidentally put more than 12 volts to the rig.
>> >
>> > Congrats on the new call!
>> >
>> > -mike/w1mt
>> >
>> > --- Kurt <ksaves2@sbcglobal.net> wrote:
>> >
>> >
>> >;>Hi,
>> >>
>> >> Would a regulated 0-18V 0-3amp power supply be
>> >>decent enough to run
>> >>the ATS-3A and QBSA units? Got my call yesterday.
>> >>KC9LDH.
>> >>I could select 10V and be "regulated" too.
>> >>

1149. Re: Power Supply

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-23 00:23:08 UTC
From: radio_kx0r
Topic: 1143 Message: 1149

Kurt,

If you run your ATS-3A from the regulator in the QBSA, your power supply will need to give about 3 volts more than the output of the QBSA's regulator. So if you set the QBSA to 11 volts, you'll need at least 14 volts input. The ATS-3A should not require more than about 1 ampere - if it is correctly tuned and matched, it may require somewhat less. Efficiency of the rig is high. Please never try to run the ATS3A on more than 12V - even 12V requires a nearly perfect match!

A simple antenna like a dipole, cut for the frequency you plan to use, and hung at least 25 or 30 feet high will get you started. Your isolation should not matter, unless you're down in a deep hole, like a deep canyon. Even in a hole you should be able to make contacts on 80 meters, where signals going up at high angles can connect you to lots of other hams. The higher your frequency, the more important it becomes to be up high, with a clear horizon. Even on 20 meters you don't need a very special location to make lots of daytime contacts.

If you're new to CW, it will take a while to get through the learning curve, but it's worth it. The rewards are lifelong. Weekends and evenings are the best times to find others to contact. CW comes faster to some folks than to others - it took me years to get used to working DXers and contesters, even though I started out as a teenager.

You have to be a better operator to enjoy QRP than to succeed with a more powerful rig. Copying other QRP stations sometimes requires skills which take a while to develop. Give yourself plenty of time. Many of the people in this ATS group are seasoned operators who like the challenge of QRP CW and who enjoy using minimal equipment. Even today I'll admit that some of my best long, solid, ragchew contacts were when I was running over 100 watts with a good antenna and good band conditions. With 5 watts or less you're not going to knock the socks off too many guys, but you will eventually have some amazing QSO's. The ATS3 will work lots a DX when things are right.

25 years ago I built a little mosfet transmitter with a VN67AF and a crystal oscillator. It put out 2 or 3 watts on 40 meters. I wondered if anyone could hear it - this was before QRP was very popular. I ended up working hundreds of stations on 40 meters over time - I used to get on at about 22:30 local time, and there were more old timer CW ops active back then - I rag chewed for hours with those wonderful people, and most of them were amazed at how well they could hear the mosfet. They would have signed off if they couldn't copy.

My antenna was a ridiculous end-fed wire hung a few feet above my roof and over the TV antenna. It was 20-30 feet high. I used a little tuner to match it to the mosfet amp. It got out real well, particularly to the eastern and western USA - simple one-hop contacts. It was not a DX system, but it made contacts. I used an SX28 receiver I've had since I was a kid, so I had very good ears. It was such a joke to look at the big monster receiver with 15 tubes all glowing, and that little minibox mosfet transmitter! That was the magic of QRP.

Please be sure that your antenna is carefully matched to your ATS-3A. Since you have the QBSA, you can check the reflected power. It must be very low for the transmitter to operate properly. You would be smart to use a tuner or matching network of some kind to adjust your system so the reflected power is low. If you try to use one antenna for several bands, you'll need a tuner for sure; you may need a balun also. Depending on what you know, it may take quite a while to learn about antennas and matching networks...most of us are still busy learning about them.

Good luck and 72/73! Congratulations on your new call.

Carey/George
KX0R

>
> Hi,
>
> Would a regulated 0-18V 0-3amp power supply be decent enough to run
> the ATS-3A and QBSA units? Got my call yesterday. KC9LDH.
> I could select 10V and be "regulated" too.
>
> Kurt Savegnago
>

1150. Re: [AT_Sprint] Power Supply

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-23 03:57:31 UTC
From: Rick Bennett
Topic: 1143 Message: 1150

Kurt,

The propagation characteristics of HF and 2 meters are very different.? For 2 meter repeater operation, you need a nearly flat take off angle and something close to line-of-site to hit a repeater, particularly with 5 watts.? FM is not a very efficient mode.? If you live down "in a hole" in a remote area?it is hard to do much with 2 meters (without a big tower).

?

For HF, even a take off angle of 30 to 40 degrees (or higher)?will give you good chances of contacts over a large region.? CW is extremely efficient.? I recommend that you give QRP a try - it really works, even in remote areas. It is amazing what you can do on a simple wire antenna at 5 watts.

?

Not to say there is anything wrong with QRO operation.? I started out operating at about 50 watts.? But there is something really satisfying about making contacts at 5 watts or less, particularly on a rig that you built.? Looking back, I wish that I could say that I made my first contact at QRP, but I can't.

?

de kc0pet, Rick

-----Original Message-----
From: Kurt
Sent: Mar 22, 2007 8:00 AM
To: AT_Sprint@yahoogroups.com
Subject: Re: [AT_Sprint] Power Supply

Thanks,

I'll be careful. I wonder if anyone has used an amplifier with the ATS-3/3A? I do have a Ramsey Qamp-40, 40 meter unit that I plugged into a Peanut Whistle and it seemed to work fine into my Oak Hills Dummy load. (I was unlicensed at the time so all my working with equipment was through the dummy load and would listen on shortwave on the bench) I am located in an area where using true QRP to start out would not be advantageous. A little extra power might increase the odds of a contact in the beginning. I'm so isolated, I couldn't even get a response off of a good 2 meter repeater at 1700h local time, 1 mile from my house with a 5 watt H/T.:-) Weekends will be better there.

Kurt Savegnago
KC9LDH

Michael Harnage wrote:
> It should work fine. Personally, I would choose a
>; fixed voltage supply so that there would be no way to
> accidentally put more than 12 volts to the rig.
>
> Congrats on the new call!
>
> -mike/w1mt
>
> --- Kurt <ksaves2@sbcglobal.net> wrote:
>
>
>>Hi,
>>
>> Would a regulated 0-18V 0-3amp power supply be
>>decent enough to run
>>the ATS-3A and QBSA units? Got my call yesterday.
>>KC9LDH.
>>I could select 10V and be "regulated" too.
>>
>> Kurt Savegnago
>>
>>
>
>
>
>
> _____
> Bored stiff? Loosen up...
> Download and play hundreds of games for free on Yahoo! Games.
> http://games.yahoo.com/games/front
>
>
>
> Yahoo! Groups Links
>
>
>
>

1151. QRP Homebrewer Sprint

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-23 23:51:38 UTC
From: Larry Makoski
Topic: 1151 Message: 1151

Just a reminder to everyone that this Sunday evening is the Spring edition of the Homebrewer Sprint.

While the contest is open to everybody, our purpose is to promote the use of homebrewed equipment, whether it be built from scratch; or a kit ..... it matters not. QSO points will be higher depending on just how much homebrewed equpiment you happen to be using.

The time is Monday morning, March 26th from 0000-0400 UTC; or on Sunday night, March 25th from 8:00 until Midnight EDT. Both CW and PSK-31 are encouraged, and the suggested frequencies for operation are the "watering holes" for QRP CW or PSK-31 on 80, 40, 20, 15 and 10 Meters.

The suggested call is "CQ HB" and the exchange is RST / SPC / Power Out

For further contest details please visit:
http://www.njqrp.org/data/qrphomebrewersprint.html

73 de Larry W2LJ

--
73 de Larry W2LJ
QRP - When you care to use the very least!

http://www.w2lj.qrpradio.com
http://w2lj.blogspot.com/

1152. IT Works !

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-29 17:40:05 UTC
From: pipesanddrums17
Topic: 1152 Message: 1152

I must admit when I saw the size of the parts in the ATS 3-a kit I had serious doubts that I would be able to successfully build this rig.
As it turns out I was wrong! with a little time,patience and the right tools combined with some help along the way I have managed to get my 3A on the air.
First off I used Cash Olsen's method of soldering the SMD (which I would highly recommend) and while everything looked good I was having difficulty in powering up the rig. Upon close inspection I found a couple solder bridges on the chips which I removed but still nothing. I sent the board back to Steve and he discovered that there were some chip legs which were floating. These were corrected and I had the board back in a few days. I think the initial problem was not using enough solder paste for the chips..
Now the rig powered up but there was no tx...Again I double checked everything and then found out that I had failed to wind and solder in L3 on the main board. 5 minnutes and that was fixed now the rig was working perfectly!
I heard HC2SL calling CQ on 20m he answered me on my first call and gave me 599. I told him I was QRP and he said that was an honest 599 and vy strong. Since last night I have worked ZF2,UA0,UA9, HB9 and OK1 all with similar results.
This Little gem of a rig has certainly brought back the fun and excitement of years gone by. I want to thank everyone for their help and guidance making my first SMD project a great experience.
Thanks especially to John W2AGN, Petr OK1RP and to YOU Steve KD1JV for letting all of us share in your truly amazing ability to design and package all these features into such a small rig that actually works..
73
John W2GB

1153. Re: [AT_Sprint] IT Works !

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-29 18:23:13 UTC
From: Daniel Lautenschleger
Topic: 1152 Message: 1153
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

1154. Re: [AT_Sprint] IT Works !

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-29 19:14:33 UTC
From: Karl Larsen
Topic: 1152 Message: 1154

pipesanddrums17 wrote:
> I must admit when I saw the size of the parts in the ATS 3-a kit I
> had serious doubts that I would be able to successfully build this
> rig.
> As it turns out I was wrong! with a little time,patience and the
> right tools combined with some help along the way I have managed to
> get my 3A on the air.
> First off I used Cash Olsen's method of soldering the SMD (which
> I would highly recommend) and while everything looked good I was
> having difficulty in powering up the rig.

Hi John,
I live in Las Cruces, NM and Cash Olsen lives here too. I found the
Embossing Heat Tool in Pink at 1/2 price :-)
The low heater is a one burner electric from Wal Mart. I did a cheap kit
and was amazed how well Cash's method worked. It turned out the heating
is the easiest part. Getting it all stuck in the paste is the hard part...
> Upon close inspection I
> found a couple solder bridges on the chips which I removed but still
> nothing. I sent the board back to Steve and he discovered that there
> were some chip legs which were floating. These were corrected and I
> had the board back in a few days. I think the initial problem was not
> using enough solder paste for the chips..
>
You don't want to use too much paste on those tiny 40 legged devices
but if you do just use some desoldering braid and it's fixed. I agree
you needed a little more paste.
> Now the rig powered up but there was no tx...Again I double
> checked everything and then found out that I had failed to wind and
> solder in L3 on the main board. 5 minnutes and that was fixed now the
> rig was working perfectly!
>
I bet Steve missed that L3 was missing. It's just so easy to do
things wrong.
> I heard HC2SL calling CQ on 20m he answered me on my first call
> and gave me 599. I told him I was QRP and he said that was an honest
> 599 and vy strong. Since last night I have worked ZF2,UA0,UA9, HB9
> and OK1 all with similar results.
> This Little gem of a rig has certainly brought back the fun and
> excitement of years gone by. I want to thank everyone for their help
> and guidance making my first SMD project a great experience.
> Thanks especially to John W2AGN, Petr OK1RP and to YOU Steve
> KD1JV for letting all of us share in your truly amazing ability to
> design and package all these features into such a small rig that
> actually works..

> 73
> John W2GB
>
>
>
John your experience is just like all of us. The receiver is hot
and the power out is a full 5 watts. I'm going to buy a ATS3B this
summer and like you do the top side with Cash Olsen's method and then
finish it up. Having 17 and 15 meters will be a lot of fun as the bands
start to get better.

But the main reason is because I love these tiny radios!

72/73 Karl K5DI

>
>
>
>
>
> Yahoo! Groups Links
>
>
>
>
>
>

1155. Re: [AT_Sprint] FS:ATS3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-30 11:00:34 UTC
From: Pete Meier
Topic: 1155 Message: 1155

I have an ATS3a for sale.
The main board is complete, running and receiving quite nicely. Two modules - 20 and 80 meters are complete and working, 30 and 40 are in the parts bag. Using 9 volts from a regulated, adjustable power supply and some clipped-on wires to a dummy load I was seeing around a watt or so out on both band modules.

Here's the deal: Spring is here, home projects are piling up, Dayton is around the corner and I'm just not going to have time to pursue this project further for some time. Therefore I'd rather pass it along to someone else to complete and to make this happen I am asking only $145 plus shipping and will throw in a nice Whitman's Chocolate tin to mount it in. The Whitman tin is about the same size as the Altoids tin but a little deeper. My ATS3 is mounted in one and I found it has a bit more room to work with. The manual on CD is included, of course.

Please contact me direct if interested.

Pete WK8S
pmeier@...

1156. First A.T. Sprint QSO

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-30 22:22:20 UTC
From: Richard
Topic: 1156 Message: 1156

I just wanted to thank everyone who helped me through building my A.T. Sprint IIIa. I got some time to play today and finally had my first QSO using the rig. Wow! What a kick! I talked to K0CMH in St. Louis, MO from Charlotte, NC on 30 meters.

Steve,
This is truly a fun rig. Thanks for all of your work.

BTW, my call sign has changed since I last posted. I got a new vanity call. KG4PBG was not very good for phone or CW. So, now it is K4KRW.

73,

Richard
K4KRW

1157. Re: [AT_Sprint] First A.T. Sprint QSO

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-03-31 01:59:08 UTC
From: Mark Langenfeld
Topic: 1156 Message: 1157

Richard:

I very much know how you feel. Worked my first DX on my new ATS-3A today -- ON7G -- also on 30. (This, my first QRP DX QSO, looks like it will easily qualify for 1,000 miles/watt!) "Wow! What a kick!" seems to sum it up very well.

Have fun, Richard! And, while I'm at it, thanks again to all who helped me along the way!

73,

Mark -- WA9ETW

----- Original Message -----
From: Richard
To: AT_Sprint@yahoogroups.com
Sent: Friday, March 30, 2007 5:22 PM
Subject: [AT_Sprint] First A.T. Sprint QSO

I just wanted to thank everyone who helped me through building my A.T. Sprint IIIa. I got some time to play today and finally had my first QSO using the rig. Wow! What a kick! I talked to K0CMH in St. Louis, MO from Charlotte, NC on 30 meters.

Steve,
This is truly a fun rig. Thanks for all of your work.

BTW, my call sign has changed since I last posted. I got a new vanity call. KG4PBG was not very good for phone or CW. So, now it is K4KRW.

73,

Richard
K4KRW

1158. Re: [AT_Sprint] First A.T. Sprint QSO

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-04-02 11:41:54 UTC
From: kr4ez@aol.com
Topic: 1156 Message: 1158

hi,
Richard my name is Chris and i live in Rock Hill. I work
in Charlotte.

-----Original Message-----

From: "Richard" <r_in_remac@...>
Subj: [AT_Sprint] First A.T. Sprint QSO
Date: Fri Mar 30, 2007 18:22
Size: 1K
To: AT_Sprint@yahoogroups.com

I just wanted to thank everyone who helped me through building
my A.T.
Sprint IIIa. I got some time to play today and finally
had my first
QSO using the rig. Wow! What a kick! I talked to K0CMH in St.
Louis, MO from Charlotte, NC on 30 meters.

Steve,
This is truly a fun rig. Thanks for all of your work.

BTW, my call sign has changed since I last posted. I got
a new vanity
call. KG4PBG was not very good for phone or CW. So, now
it is K4KRW.

73,

Richard
K4KRW

Yahoo! Groups Links

1159. BPSK31 on ATS-3A - proof of concept

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-04-08 12:22:01 UTC
From: Vojtěch Bubník
Topic: 1159 Message: 1159

Hi gang.

After many weekends of work I have managed to let the stock ATS-3A transceiver transmit nice BPSK31 "cq ok1iak". The firmware of ATS-3A was modified to allow serial line control, which is performed over the DASH paddle pin in straight key mode. That means paddle will not work if in remote control mode. To enable both remote control and paddle would need hardware modification of the stock ATS-3A.

The only way to shape the BPSK31 envelope on a stock ATS is to key the transmitter on/off. The envelope is far from raised cosine, but the signal is not wider than of CW and the sidelobes will be hopefuly negligible at QRP levels. I tested common windows PSK31 programs how they will cope with that non ideal envelope. MIXW32, MultiPSK, DigiPan and PocketDigi worked well, WinPSK had occasional drop outs. Here is the screenshot of BPSK31 signal received on RadioShack DX-398. On the lower part of the screenshot the receiver may have been overloaded.

http://www.kufr.cz/~ok1iak/temp/BPSK31-ATS3A.png

Here is how it sounds. You may try to decode it yourself.
http://www.kufr.cz/~ok1iak/temp/cq-ok1iak-ats3-bpsk31.wav

RTTY or MFSK16 modulation patterns may be generated by ATS perfectly. Olivia uses symbol shaping, but I bet hard keying like in the case of MFSK16 will work good enough.

The serial line hardware protocol is 1200Bd asynchronous, 8bit, 1 start, one stop bit. Because I am targeting mainly handheld computers, the serial stream is generated by a sound card in the BELL 202 format and transformed to the 0/3.3V digital levels by an external FSK decoder. The two tones are 1200Hz mark and 2200Hz space. The tones are converted to 0V for space and 3.3V for mark. I did not implement ATS support into PocketDigi yet, I only wrote a simple C++ application to generate WAV sound files with various commands. Those WAV files may be played on a PC, Pocket PC or even on a mobile phone or MP3 player.

I will be happy to provide modified ATS-3A firmware source or binary, the windows wav generator source or binary or command wav files to anyone wanting to experiment. The prerequisity is to be able to flash the firmware. For introduction to ATS firmware flashing look at http://w1mt.qrpradio.com/ats3.html

I will work on PocketDigi support now and I hope to make some PSK31 QSOs when I visit my parents' house. I do not have any antenna possibility at my appartment. BTW I will try to pursue some student at my alma mater - the Czech Technical University to port PocketDigi to a java enabled mobile phone as his master diploma work.

Now to the tone decoder. I built only decoding part of the following schematic http://www.qsl.net/yo5ofh/projects/xrmodem.gif . The analog FSK demodulator chip from Exar XR2211 is readily available and cheap. The value of C5 is too big, I decreased it to 4N7. I connected pins 6 and 7 to provide muting if there is no signal on the line. Without input signal the DASH pin is low and ATS-3A is configured to straight key / remote control on

startup. I connected two red LED diodes to pin 7 to pull the maximum output voltage to 3.3V.

The XR2211 decoder is analog, which means it is sensitive to component tolerances. I do not have much experience with analog circuits and I had hard time to tune it. Tone generator is very handy, there is a bunch of free PC sound card tone generators on the internet. Connect LED to pin 5 to indicate phase loop lock. This will help to avoid tuning the oscillator above space or below mark tones. Put LED on pin 6 to indicate decoded tone. The transition frequency is geometric average of the two tones, sqrt(1200*2200)=1625Hz.

This is a picture of my prototype. The black plastic box is half empty and the tone decoder will be much smaller if made in SMD. The tone decoder sources cca 4mA. The small bread board above the plastic box is a MAX232 level convertor to monitor the FSK decoder.

http://www.kufr.cz/~ok1iak/temp/xr2211-ats3a.jpg

There are following alternatives to the XR2211 FSK decoder. MX/FX614 chips are expensive (about $10) and hard to get, but they consume only 1mA at 3.3V. They are digital, no tuning is nescessary. Daugter board mounted on the opposite to the band filter will fit inside the altoids tin for sure.

Other possibility would be to decode pulses instead of tones, which would need only input level converter with single op amp, or even just the internal comparator of MPS430 (this would mean hardware mods to the stock ATS3). Imagine sending short plus/minus pulses to the sound card. Logical one will not send any pulse, logical zero will send short plus/minus ripple. Average value will be zero. The pulse will be deformed and it will ring for a while, but if the pulse is lot shorter than the bit slot, it will hopefuly ring out in the same slot. This approach is similar to the SIR infrared hardware layer. I hope to find time to experiment with it.

The last possibility is using serial line of the PC. This would work for remote control for sure, but to modulate DDS directly means exact timing on the control line, which is hard to do on multitasking operating systems. There are multimedia timers on Windows though, which shall enable timing with 2msec precission. That shall be good enough. There are no multimedia timers on Pocket PC. I do not know about Linux.

The remote control protocol I implemented works in two modes - command or modulate. In command mode the commands are packed into frames similar to Icom IC-V protocol. The frames start with FE and end with FD. The first payload byte is command, then 0 to 6 data bytes may follow. The payload bytes are in BCD format, the A to F nibbles may not appear inside the payload. I implemented the following commands. The protocol is very alpha and will certainly change.

01 -
Beep morse characters. Just for testing the connection. The format of morse characters is the same as used by the firmware internally.
An example packet "fe 01 05 10 0f 17 fd" will beep "ahoj".

02 -
Set frequency, reset RIT/XIT state. Frequency is sent by 4 BCD bytes, lowest digit first.
Command "fe 02 23 98 01 07 fd" will set the frequency to 07,019,823Hz.

03 -
The same as 02, but additionaly it will announce the new frequency by AFA on success.

04 -
Set XIT offset and start BPSK modulation. The transmitter will be off until the first modulation command.
The XIT offset is sent by 2 BCD bytes. Negative offsets are sent in 9 complement format.
Command "fe 04 34 12 fd" will start BPSK modulation at +1234Hz,
Command "fe 04 99 99 fd" will start BPSK modulation at -1Hz.

After the command 04 is succesfully decoded, serial line will no more respond to command frames, but to single byte modulation commands.
00 - End of modulation, stop TX and return to command mode.
01 - Key up, but stay in modulation mode. Used to simulate raised cosine amplitude envelope.
02 - Set phase to 0 degrees, key down the transmitter.
03 - Set phase to 180 degrees, key down the transmitter.

The UART is implemented using interrupts and timers, so it works in background and does not consume additional power. Baud rate is derived from the 32768 clock resonator. I had to comment out some original code to make place for remote control. Callibration code is not needed after the transceiver is callibrated. DFE or tune modes are not nescessary too. If instead of the 4k MSP430 chip the 8k variat was used, it would all fit nicely. Maybe the ATS-3b will be fitted with more FLASH?

73, Vojtech OK1IAK

1160. Modulator for the ATS3

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-04-08 14:22:01 UTC
From: Terry ONeill
Topic: 1160 Message: 1160

Anyone have a circuit for an add-on modulator for the ATS3?

1161. April NAQCC Sprint

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-04-10 01:06:37 UTC
From: Larry Makoski
Topic: 1161 Message: 1161

This Tuesday evening, the North American QRP CW Club will be holding its monthly sprint.

Here are the particulars:

Date and time:
Wednesday April 11th, 0030-0230 UTC
(Remember that's Tuesday evening here in the USA) That's 8:30 - 10:30 EDT, 7:30 - 9:30 CDT, 6:30 - 8:30 MDT and 5:30 - 7:30 PDT.

Bands - Frequencies:
80M - 3555-3565 kHz (Be courteous to FISTS operating on 3558 kHz)
40M - 7039-7050 kHz (Avoid W1AW on 7047.5 kHz).
20M - 14059-14065 kHz. General:
A particular station may be worked once on each band. Operate CW only.
All licensed amateurs are invited to participate, but only those operating QRP (5 watts or less) are eligible for awards.

Call: CQ NA

Exchange:
RST - SPC (State Province or Country) - NAQCC Nr.
(non-Members substitute power level for NAQCC Nr., e.g. 5W, 1W, etc. Be sure to add the W.)

QSO Points:
QSO with a Member, 2 points.
QSO with a Non-member, 1 point.

Multipliers:
Each USA state
Each VE province
Each country except W/VE
All multipliers count only once in the contest.

Bonus:
If you use only a straight key for the entire sprint, multiply your score by 2.
If you use only a bug for the entire sprint, multiply your score by 1.5.
If you key with anything other than a straight key or bug, there is no bonus multiplier.

Categories:
SWA - simple wire antennas - for those using a simple wire antenna per NAQCC definition.
GAIN - gain antennas - for those using other than a simple wire antenna.

Special Award:
For the one making the highest score using an indoor antenna. At least 1/2 of the radiating portion of the antenna must be indoors.

Entry Deadline:
All entries must be RECEIVED before 2400Z on April 17, 2007. So submit as soon as possible,

especially regular mail entries.

For further information, please visit: http://www.arm-tek.net/~yoel//sprintrules.html (http://www.arm-tek.net/%7Eyoel//sprintrules.html)
To join the NAQCC, please visit: http://www.arm-tek.net/~yoel//joinup.html (http://www.arm-tek.net/%7Eyoel//joinup.html)

73 de Larry W2LJ
NAQCC #35

1162. NAQCC APril Sprint

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-04-10 01:11:30 UTC
From: Larry Makoski
Topic: 1162 Message: 1162

This Tuesday evening, the North American QRP CW Club will be holding its monthly sprint.

Here are the particulars:

Date and time:
Wednesday April 11th, 0030-0230 UTC
(Remember that's Tuesday evening here in the USA) That's 8:30 - 10:30 EDT, 7:30 - 9:30 CDT, 6:30 - 8:30 MDT and 5:30 - 7:30 PDT.

Bands - Frequencies:
80M - 3555-3565 kHz (Be courteous to FISTS operating on 3558 kHz)
40M - 7039-7050 kHz (Avoid W1AW on 7047.5 kHz).
20M - 14059-14065 kHz. General:
A particular station may be worked once on each band. Operate CW only. All licensed amateurs are invited to participate, but only those operating QRP (5 watts or less) are eligible for awards.

Call: CQ NA

Exchange:
RST - SPC (State Province or Country) - NAQCC Nr.
(non-Members substitute power level for NAQCC Nr., e.g. 5W, 1W, etc. Be sure to add the W.)

QSO Points:
QSO with a Member, 2 points.
QSO with a Non-member, 1 point.

Multipliers:
Each USA state
Each VE province
Each country except W/VE
All multipliers count only once in the contest.

Bonus:
If you use only a straight key for the entire sprint, multiply your score by 2.
If you use only a bug for the entire sprint, multiply your score by 1.5.
If you key with anything other than a straight key or bug, there is no bonus multiplier.

Categories:
SWA - simple wire antennas - for those using a simple wire antenna per NAQCC definition.
GAIN - gain antennas - for those using other than a simple wire antenna.

Special Award:
For the one making the most 40 Meter QSOs.

Entry Deadline:
All entries must be RECEIVED before 2400Z on April 17, 2007. So submit
as soon as possible, especially regular mail entries.

For further information, please visit:
http://www.arm-tek.net/~yoel//sprintrules.html
To join the NAQCC, please visit: http://www.arm-tek.net/~yoel//joinup.html

73 de Larry W2LJ
NAQCC #35

--
73 de Larry W2LJ
QRP - When you care to use the very least!

http://www.w2lj.qrpradio.com
http://w2lj.blogspot.com/

1163. Re: [AT_Sprint] NAQCC APril Sprint

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-04-10 16:42:06 UTC
From: Hank Greeb
Topic: 1162 Message: 1163

Watch out for the Michigan Net (QMN) at 0200Z on 3563 KHz.

Larry Makoski wrote:

>This Tuesday evening, the North American QRP CW Club will be holding its
>monthly sprint.
>
>Here are the particulars:
>
>Date and time:
>Wednesday April 11th, 0030-0230 UTC
>(Remember that's Tuesday evening here in the USA) That's 8:30 - 10:30
>EDT, 7:30 - 9:30 CDT, 6:30 - 8:30 MDT and 5:30 - 7:30 PDT.
>
>Bands - Frequencies:
>80M - 3555-3565 kHz (Be courteous to FISTS operating on 3558 kHz)
>40M - 7039-7050 kHz (Avoid W1AW on 7047.5 kHz).
>20M - 14059-14065 kHz. General:
>A particular station may be worked once on each band. Operate CW only.
>All licensed amateurs are invited to participate, but only those
>operating QRP (5 watts or less) are eligible for awards.
>
>Call: CQ NA
>
>Exchange:
>RST - SPC (State Province or Country) - NAQCC Nr.
>(non-Members substitute power level for NAQCC Nr., e.g. 5W, 1W, etc. Be
>sure to add the W.)
>
>QSO Points:
>QSO with a Member, 2 points.
>QSO with a Non-member, 1 point.
>
>Multipliers:
>Each USA state
>Each VE province
>Each country except W/VE
>All multipliers count only once in the contest.
>
>Bonus:
>If you use only a straight key for the entire sprint, multiply your
>score by 2.
>If you use only a bug for the entire sprint, multiply your score by 1.5.
>If you key with anything other than a straight key or bug, there is no
>bonus multiplier.

>
>Categories:
>SWA - simple wire antennas - for those using a simple wire antenna per
>NAQCC definition.
>GAIN - gain antennas - for those using other than a simple wire antenna.
>
>Special Award:
>For the one making the most 40 Meter QSOs.
>
>Entry Deadline:
>All entries must be RECEIVED before 2400Z on April 17, 2007. So submit
>as soon as possible, especially regular mail entries.
>
>For further information, please visit:
>http://www.arm-tek.net/~yoel//sprintrules.html
>To join the NAQCC, please visit: http://www.arm-tek.net/~yoel//joinup.html
>
>73 de Larry W2LJ
>NAQCC #35
>
>
>

1164. Run for the Bacon, 4/15/2007, 6:00 pm

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-04-16 00:42:07 UTC
From: AT_Sprint@yahoogroups.com
Topic: 1164 Message: 1164

Reminder from: AT_Sprint Yahoo! Group
http://groups.yahoo.com/group/AT_Sprint/cal

Run for the Bacon
Sunday April 15, 2007
6:00 pm - 8:00 pm
(This event repeats every month on the third Sunday.)
Location: Your shack or anywhere

Notes:
This Sunday evening, the Flying Pigs Amateur Radio Club International will be holding its monthly Run For The Bacon. This is a friendly, two hour QRP CW Sprint, which is open to ALL radio amateurs, will last from 9:00 - 11:00PM EDT (0200-0400 UTC Monday).

You may work stations once per band on 160, 80, 40, 20, 15 or 10 Meters. Suggested starting frequencies are 1.812, 3.562, 7.044, 14.062, 21.062, and 28.062 MHz.

The exchange is RST, S/P/C (State, Province, Country) and Flying Pigs membership number. If you're not a member of the Flying Pigs, and would like to be; then please cli

All Rights Reserved
Copyright ? 2007
Yahoo! Inc.
http://www.yahoo.com

Privacy Policy:
http://privacy.yahoo.com/privacy/us

Terms of Service:
http://docs.yahoo.com/info/terms/

1165. Amplifier

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-04-16 19:11:16 UTC
From: agfmdy
Topic: 1165 Message: 1165

Hi,

Anyone try the ATS-3A with a 35 watt HF packer amplifier?
I thought it would be nice to add for base operations if
conditions were lousy. The packer I guess and take the 2 to 2.5 watts
and boost it to 35. Got a hotplate, heatgun and a cheap SMT kit am
going to try the Olsen method of construction on first before tackling
the ATS-3A.

Kurt
KC9LDH

1166. Re: [AT_Sprint] Amplifier/SMT construction

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-04-16 19:49:16 UTC
From: Michael Harnage
Topic: 1165 Message: 1166

Kurt,

Never used anything over 5 watts myself so can't speak
for the amplifier part of your questions BUT...

I just built an FCC-2 board (Norcal sells them) using
Cash Olsen's paste and an Oster convection oven I
bought at Costco. This is a double sided board and was
my test case into the fast construction method for
SMT. I populate both sides of the board and it worked
like a charm, highly recommended. I did put an
electrolytic cap on backwards but was able to use an
embossing gun to heat it up and flip it around. Worked
like a champ!

Unless I run out of paste I will never again solder
SMT with an iron. Only thing you need the iron for is
to help wick any solder bridges off the small pitch
pins.

You will like using the hot air method!

-mike/w1mt

--- agfmdy <ksaves2@...> wrote:

> Got a hotplate, heatgun and a
> cheap SMT kit am
> going to try the Olsen method of construction on
> first before tackling
> the ATS-3A.
>

_____
Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

1167. Re: [AT_Sprint] Amplifier

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-04-16 20:27:04 UTC
From: Bill Noyce
Topic: 1165 Message: 1167

I don't have an ATS-3A, but I have an ATS-3, and I often use it with the HF-Packer Amp. Running the ATS-3 on 12 volts overdrives the amp (I built it with the standard attenuator, so it wants 2-2.5 watts in). Running the ATS-3 on a 9v battery works well with the amp, and I built a 9v regulator into a mini mint tin, with Anderson Powerpole input and the proper plugs for ATS-3 and ATS-2 on the output, so it's convenient to run off a gel cell or power supply too.

Because I use the amp in CW traffic nets, I made a mod to my amp to provide "semi-QSK". I think you can find it in the forum on the HF-Packer Amp site. Basically, I used a center-off DPDT switch in place of the standby/on switch, to alter one of the resistances in the timing circuit that controls the DC-DC converter and the antenna relay. Up is standby, center is semi-QSK, down is VOX-with-hang.
-- Bill, AB1AV

1168. Re: [AT_Sprint] Amplifier/SMT construction

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-04-16 20:31:35 UTC
From: Bill Noyce
Topic: 1165 Message: 1168

> Unless I run out of paste I will never again solder
> SMT with an iron. Only thing you need the iron for is
> to help wick any solder bridges off the small pitch
> pins.

Mike, how does this work for something relatively large (like an NC2030)? (After some practice, of course!)
I'm wondering if you need to poplate the whole board in one session, and get it into the oven before the paste dries out? Or can you spread the populating over a week or more, and then cook it once? Or can you do it in sections, cooking each one as you go?
-- Bill

1169. Re: [AT_Sprint] SMT construction

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-04-16 21:11:36 UTC
From: Michael Harnage
Topic: 1165 Message: 1169

Bill,

The solder paste is Kester 256. It's tack time is 8 hours soooo, I would mount it all in one session then cook. I think even an NC2030 could be done in 1 session.

Don't know if you can do part of the board at a time. I wouldn't think that repeated trips to the oven would affect the parts already mounted as long as you watch your temperature profile each time (which you have to do anyway). BUT I have not done that yet so proceed at your own risk. Perhaps someone else knows?

I do know that those rework stations are just hot air so that leads me to believe that if you keep the temperatures in the proper range you should be OK with multiple cooking sessions.

Anyone done it this way?

-mike

--- Bill Noyce <WBNoyce@...> wrote:

> Mike, how does this work for something relatively
> large (like an
> NC2030)? (After some practice, of course!)
> I'm wondering if you need to poplate the whole board
> in one session,
> and get it into the oven before the paste dries out?
> Or can you
> spread the populating over a week or more, and then
> cook it once? Or
> can you do it in sections, cooking each one as you
> go?
> -- Bill

Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

1170. Re: [AT_Sprint] SMT construction

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-04-16 22:03:02 UTC
From: Mark Brueggemann
Topic: 1165 Message: 1170

--- Michael Harnage <w1mt@...> wrote:

> Don't know if you can do part of the board at a time.
> I wouldn't think that repeated trips to the oven would
> affect the parts already mounted as long as you watch
> your temperature profile each time

The trick is doing just that, not just keeping watch on
the profile but ensuring the temperature is the same
across the board. I suspect that would be difficult
to do in a toaster oven, you may end up roasting one
part of the board waiting for a cooler spot just to
reflow. Semiconductors usually have a reflow profile
you should adhere to which limits temp rise rate and
peak temperatures, again, which would be difficult
in a frypan or toaster oven. Hot air would seem to
be the best option in a multi-stage assembly scenario,
at least that way you're not overcooking the parts
that don't need it. Maybe you could come up with
a process that you reflow all the (less heat sensitive)
passives at once in the oven, and put all the semi-
conductors on by hand. Having assembled boards by
both methods I can't see how the paste/oven method
offers any useful benefit, but I guess that all depends
on how proficient you are with an iron and SMT.

Mark K5LXP
Albuquerque, NM

1171. SMT Construction

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-04-16 22:22:42 UTC
From: pipesanddrums17
Topic: 1171 Message: 1171

I used the Cash Olsen method when I built my ATS-3A. I mounted the SMT parts over the course of 3 days always keeping the board in the fridge in a plastic box to maintain the temp of the solder. It soldered together perfectly and I had a very professional result. One thing I would recommend is that when you apply the rope of paste on the chip pads use enough! you can go back later and wick everything off the chip legs all solder that will be left will be almost impossible to see but will be there under the legs and that's where you want it. I also found that the beverage warmer is too small for the ATS-3A board instead I used the warming plate on the coffee maker which was just the right size
73
John
W2GB

1172. Re: [AT_Sprint] SMT construction

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-04-16 21:50:35 UTC
From: asfco
Topic: 1165 Message: 1172

I used the Cash Olsen method when I built my ATS-3A. I mounted the SMT parts over the course of 3 days always keeping the board in the fridge in a plastic box to maintain the temp of the solder. It soldered together perfectly and I had a very professional result. One thing I would recommend is that when you apply the rope of paste on the chip pads use enough! you can go back later and wick everything off the chip legs all solder that will be left will be almost impossible to see but will be there under the legs and that's where you want it. I also found that the beverage warmer is too small for the ATS-3A board instead I used the warming plate on the coffee maker which was just the right size
73
John
W2GB
----- Original Message -----
From: Michael Harnage
To: AT_Sprint@yahoogroups.com
Sent: Monday, April 16, 2007 5:11 PM
Subject: Re: [AT_Sprint] SMT construction

Bill,

The solder paste is Kester 256. It's tack time is 8
hours soooo, I would mount it all in one session then
cook. I think even an NC2030 could be done in 1
session.

Don't know if you can do part of the board at a time.
I wouldn't think that repeated trips to the oven would
affect the parts already mounted as long as you watch
your temperature profile each time (which you have to
do anyway). BUT I have not done that yet so proceed at
your own risk. Perhaps someone else knows?

I do know that those rework stations are just hot air
so that leads me to believe that if you keep the
temperatures in the proper range you should be OK with
multiple cooking sessions.

Anyone done it this way?

-mike

--- Bill Noyce <WBNoyce@...> wrote:

>
> Mike, how does this work for something relatively
> large (like an
> NC2030)? (After some practice, of course!)
> I'm wondering if you need to poplate the whole board

> in one session,
> and get it into the oven before the paste dries out?
> Or can you
> spread the populating over a week or more, and then
> cook it once? Or
> can you do it in sections, cooking each one as you
> go?
> -- Bill
>

_____
Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

1173. Contacts of kit builders

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-04-18 01:52:54 UTC
From: Ronny
Topic: 1173 Message: 1173

Anyone have a list of people willing to build SMT kits and what they would charge? I want one of these but lack the equipment and eyesight to get it done without a great deal of frustration.

Thanks!
Ronny K4RJJ/AG

1174. Re: FS:ATS3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-04-26 18:30:04 UTC
From: w4mjt
Topic: 1155 Message: 1174

--- In AT_Sprint@yahoogroups.com, Pete Meier <pmeier@...> wrote:
>
> I have an ATS3a for sale.
> The main board is complete, running and receiving quite nicely.
Two modules - 20 and 80 meters are complete and working, 30 and 40
are in the parts bag. Using 9 volts from a regulated, adjustable
power supply and some clipped-on wires to a dummy load I was seeing
around a watt or so out on both band modules.
>
> Here's the deal: Spring is here, home projects are piling up,
Dayton is around the corner and I'm just not going to have time to
pursue this project further for some time. Therefore I'd rather pass
it along to someone else to complete and to make this happen I am
asking only $145 plus shipping and will throw in a nice Whitman's
Chocolate tin to mount it in. The Whitman tin is about the same size
as the Altoids tin but a little deeper. My ATS3 is mounted in one
and I found it has a bit more room to work with. The manual on CD is
included, of course.
>
> Please contact me direct if interested.
>
> Pete WK8S
> pmeier@...
>
lPete,
\\
Just wondered if you have sold your ATS3a yet ?

Furman Doty

1175. PSK with ATS3A, success on the air

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-05-01 19:53:40 UTC
From: Vojtěch Bubník
Topic: 1175 Message: 1175

Hi gang.

In my previous posting, I described my first tests of BPSK31 signal and ATS3A.
http://www.kufr.cz/~ok1iak/temp/bpsk31-ats3-proof-of-concept.htm

During the last weekends, I extended PocketDigi to modulate BPSK31, BPSK63 and QPSK31 on ATS3A. The interface and protocol is described in my previous posting.

I tested it on the table first. The signal is not as clean as if it would be generated by a SSB transceiver, but I found worse signals on the air. Most of the commonly used PSK software received that non ideal BPSK31 and BPSK63 signal without any problems. The exception is QPSK31, which was decoded only by MixW, but nobody is using QPSK31 on the air anyway.

I had a first chance to try it on the air this weekend. My PSK31 setup is very portable now, but I aim to make it even smaller.
- Stock ATS3A with a modified firmware
- FSK Bell 202 decoder (receiving part of BayCom modem, half the size of Altoids tin, see my previous post)
- 2xLiPol 1800mAh battery
- Z-match
- iPaq 3630 Pocket PC computer
- foldable infrared keyboard
- LW antenna

I made about 10 QSOs on 40 and 80m, most of the QSOs on the first call. I did not receive any complaints about signal quality, I suppose that the sidelobes are below noise if using QRP levels. I checked temperature of the finals after each longer QSO and the finals were only warm.

Wow! The first PSK31 transceiver in Altoids tin, giving 2 watts with 80% efficiency on two LiPols. Anyone wants to experiment?

The next steps will be RTTY and other MFSK modes (MFSK16, Olivia, Contestia) and simplification of the interface board. I hope to replace the external FSK decoder by a single Op Amp and firmware extensions. I hope to fit the interface board in the main Altoids tin one day.

73, Vojtech OK1IAK

1176. Has anyone worked Steve?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-05-04 13:15:00 UTC
From: John Harper
Topic: 1176 Message: 1176

KD1JV is now 55 miles into hike of Appalachian Trail. He doesn't mention whether or not he's able (or has the energy) to get on the air, but this page has recently been updated:
http://www.trailjournals.com/entry.cfm?id=177227

The date at the top is wrong - I believe it is generated by the website automatically.

Has anyone worked him?

73,

John AE5X
http://www.ae5x.com

1177. Re: [AT_Sprint] Has anyone worked Steve?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-05-04 13:36:27 UTC
From: Hank Greeb
Topic: 1176 Message: 1177

I worked Steve during the QRPTTF last Saturday when I was operating as
WQ8RP. That was April 28, so the dates must be wrong on the blog.
Later he sent a note from a motel saying that he had a sore ankle from
his hiking shoes, and was taking a rest day.

72 de n8xx Hg

John Harper wrote:
>
> KD1JV is now 55 miles into hike of Appalachian Trail. He doesn't
> mention whether or not he's able (or has the energy) to get on the
> air, but this page has recently been updated:
> http://www.trailjournals.com/entry.cfm?id=177227
> <http://www.trailjournals.com/entry.cfm?id=177227>
>
> The date at the top is wrong - I believe it is generated by the
> website automatically.
>
> Has anyone worked him?
>
> 73,
>
> John AE5X
> http://www.ae5x.com <http://www.ae5x.com>
>
> __ <!-- #ygrp-mlmsg {font-size:13px; font-family:
>
arial,helvetica,clean,sans-serif;*font-size:small;*font:x-small;}size:inherit;font:100%;}
> #ygrp-mlmsg select, input, textarea {font:99%
> arial,helvetica,clean,sans-serif;} #ygrp-mlmsg pre, code {font:115%
> monospace;*font-size:100%;} #ygrp-mlmsg * {line-height:1.22em;}
> #ygrp-text{ font-family: Georgia; } #ygrp-text p{ margin: 0 0 1em 0; }
> #ygrp-tpmsgs{ font-family: Arial; clear: both; } #ygrp-vitnav{
> padding-top: 10px; font-family: Verdana; font-size: 77%; margin: 0; }
> #ygrp-vitnav a{ padding: 0 1px; } #ygrp-actbar{ clear: both; margin:
> 25px 0; white-space:nowrap; color: #666; text-align: right; }
> #ygrp-actbar .left{ float: left; white-space:nowrap; }
> .bld{font-weight:bold;} #ygrp-grft{ font-family: Verdana; font-size:
> 77%; padding: 15px 0; } #ygrp-ft{ font-family: verdana; font-size:
> 77%; border-top: 1px solid #666; padding: 5px 0; } #ygrp-mlmsg #logo{
> padding-bottom: 10px; } #ygrp-vital{ background-color: #e0ecee;
> margin-bottom: 20px; padding: 2px 0 8px 8px; } #ygrp-vital #vithd{
> font-size: 77%; font-family: Verdana; font-weight: bold; color: #333;
> text-transform: uppercase; } #ygrp-vital ul{ padding: 0; margin: 2px
> 0; } #ygrp-vital ul li{ list-style-type: none; clearoth; border: 1px

```
> solid #e0ecee; } #ygrp-vital ul li .ct{ font-weight: bold; color:
> #ff7900; float: right; width: 2em; text-align:right; padding-right:
> .5em; } #ygrp-vital ul li .cat{ font-weight: bold; } #ygrp-vital a {
> text-decoration: none; } #ygrp-vital a:hover{ text-decoration:
> underline; } #ygrp-sponsor #hd{ color: #999; font-size: 77%; }
> #ygrp-sponsor #ov{ padding: 6px 13px; background-color: #e0ecee;
> margin-bottom: 20px; } #ygrp-sponsor #ov ul{ padding: 0 0 0 8px;
> margin: 0; } #ygrp-sponsor #ov li{ list-style-type: square; padding:
> 6px 0; font-size: 77%; } #ygrp-sponsor #ov li a{ text-decoration:
> none; font-size: 130%; } #ygrp-sponsor #nc { background-color: #eee;
> margin-bottom: 20px; padding: 0 8px; } #ygrp-sponsor .ad{ padding: 8px
> 0; } #ygrp-sponsor .ad #hd1{ font-family: Arial; font-weight: bold;
> color: #628c2a; font-size: 100%; line-height: 122%; } #ygrp-sponsor
> .ad a{ text-decoration: none; } #ygrp-sponsor .ad a:hover{
> text-decoration: underline; } #ygrp-sponsor .ad p{ margin: 0; } o
> {font-size: 0; } .MsoNormal { margin: 0 0 0 0; } #ygrp-text tt{
> font-size: 120%; } blockquote{margin: 0 0 0 4px;} .replbq {margin:4}
```

1178. Portable bag for ATS tcvr

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-05-13 13:01:06 UTC
From: Petr Ourednik
Topic: 1178 Message: 1178

Hi folks,

if anybody is interested in the nice and rugged bag for portable operation of ATS tcvr then lets try to check two of them I bought for myself. See Photos section > ATS bags folder.
First of them is even more rugged and bit smaller > good to put inside an Altoids box.
Second is bit bigger to put inside even headphones and maybe battery...

I bought for myself both types and works fine for me. As I bought few pcs more they are available...

Price is $6.99/each + shipping.

Let me know if You are interested in that bags.

So where we will go next with our ATS famous radio?

73, Petr OK1RP

1179. Portable bag

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-05-15 02:18:42 UTC
From: Jonathan
Topic: 1179 Message: 1179

Nice bag, but where's the ATS3 in it?
Jonathan

==========
If you can't learn to do something well, learn to enjoy doing it poorly.
==========

1180. May NAQCC Sprint

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-05-15 02:20:25 UTC
From: Larry Makoski
Topic: 1180 Message: 1180

This Wednesday evening, the North American QRP CW Club will be holding its monthly sprint.

Here are the particulars:

Date and time:
Thursday May 17th, 0030-0230 UTC
(Remember that's Wednesday evening here in the USA) That's 8:30 - 10:30 EDT, 7:30 - 9:30 CDT, 6:30 - 8:30 MDT and 5:30 - 7:30 PDT.

Bands - Frequencies:
80M - 3555-3565 kHz (Be courteous to FISTS operating on 3558 kHz)
40M - 7039-7050 kHz (Avoid W1AW on 7047.5 kHz).
20M - 14059-14065 kHz. General:
A particular station may be worked once on each band. Operate CW only. All licensed amateurs are invited to participate, but only those operating QRP (5 watts or less) are eligible for awards.

Call: CQ NA

Exchange:
RST - SPC (State Province or Country) - NAQCC Nr.
(non-Members substitute power level for NAQCC Nr., e.g. 5W, 1W, etc. Be sure to add the W.)

QSO Points:
QSO with a Member, 2 points.
QSO with a Non-member, 1 point.

Multipliers:
Each USA state
Each VE province
Each country except W/VE
All multipliers count only once in the contest.

Bonus:
If you use only a straight key for the entire sprint, multiply your score by 2.
If you use only a bug for the entire sprint, multiply your score by 1.5.
If you key with anything other than a straight key or bug, there is no bonus multiplier.

Categories:
SWA - simple wire antennas - for those using a simple wire antenna per NAQCC definition.
GAIN - gain antennas - for those using other than a simple wire antenna.

Special Award:
For the one making the most 20 Meter QSOs.

Entry Deadline:
All entries must be RECEIVED before 2400Z onMay 23, 2007. So submit as soon as possible, especially regular mail entries.

For further information, please visit:
http://www.arm-tek.net/~yoel//sprintrules.html
To join the NAQCC, please visit: http://www.arm-tek.net/~yoel//joinup.html

73 de Larry W2LJ
NAQCC #35

--
73 de Larry W2LJ
QRP - When you care to use the very least!

http://www.w2lj.qrpradio.com
http://w2lj.blogspot.com/

1181. Re: Portable bag

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-05-19 20:33:27 UTC
From: Petr Ourednik
Topic: 1179 Message: 1181

Jonathan,

:) good question! My ATS is now unassembled as I decided to re-housing to new box. New facelift should be more rugged and band modules will be connected externally. So at the time I made the pics of the bags I had not the radio to put inside to demonstrate how it fit...

What I can do is to make pic with empty Altoids to have an idea.

73, Petr OK1RP

--- In AT_Sprint@yahoogroups.com, Jonathan <kc7fys@...> wrote:
>
> Nice bag, but where's the ATS3 in it?
> Jonathan
>
> ==
> If you can't learn to do something well, learn to enjoy doing it poorly.
> ==
>

1182. May RFTB

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-05-20 01:59:59 UTC
From: Larry Makoski
Topic: 1182 Message: 1182

This Sunday evening the Flying Pigs Amateur Radio Club International will be holding its monthly Run For The Bacon. This is a friendly, two hour QRP CW Sprint, which is open to ALL radio amateurs, will last from 9:00 - 11:00PM EDT (0100-0300 UTC Monday).

You may work stations once per band on 160, 80, 40, 20, 15 or 10 Meters. Suggested starting frequencies are 1.812, 3.562, 7.044, 14.062, 21.062, and 28.062 MHz.

The exchange is RST, S/P/C (State, Province, Country) and Flying Pigs membership number. If you're not a member of the Flying Pigs, and would like to be; then please click on the "membership" hyperlink on .http://www.gentzow.com/fpqrp/ Otherwise, non-members can just use their output power figure.

You can report your score via the Autolog page which can be found at :
http://gentzow.com/fpqrp/autolog.asp
or you can mail your logs to the address given on the Autolog page. The deadline for logs is May 27th at 2400 UTC.

Hope to catch you on the air Sunday evening!

72 es "oo"
Larry W2LJ FP#612

--
73 de Larry W2LJ
QRP - When you care to use the very least!

http://www.w2lj.qrpradio.com
http://w2lj.blogspot.com/

1183. Run for the Bacon, 5/20/2007, 6:00 pm

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-05-21 00:41:56 UTC
From: AT_Sprint@yahoogroups.com
Topic: 1183 Message: 1183

Reminder from: AT_Sprint Yahoo! Group
http://groups.yahoo.com/group/AT_Sprint/cal

Run for the Bacon
Sunday May 20, 2007
6:00 pm - 8:00 pm
(This event repeats every month on the third Sunday.)
Location: Your shack or anywhere

Notes:
This Sunday evening, the Flying Pigs Amateur Radio Club International will be holding its monthly Run For The Bacon. This is a friendly, two hour QRP CW Sprint, which is open to ALL radio amateurs, will last from 9:00 - 11:00PM EDT (0200-0400 UTC Monday).

You may work stations once per band on 160, 80, 40, 20, 15 or 10 Meters. Suggested starting frequencies are 1.812, 3.562, 7.044, 14.062, 21.062, and 28.062 MHz.

The exchange is RST, S/P/C (State, Province, Country) and Flying Pigs membership number. If you're not a member of the Flying Pigs, and would like to be; then please cli

All Rights Reserved
Copyright ? 2007
Yahoo! Inc.
http://www.yahoo.com

Privacy Policy:
http://privacy.yahoo.com/privacy/us

Terms of Service:
http://docs.yahoo.com/info/terms/

1184. QBSA - Changes /Mods ??

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-05-22 11:03:00 UTC
From: phm7744
Topic: 1184 Message: 1184

Hi all,
I'm about to start construction of the QBSA kit. Are there changes or mods I should consider adding while I build (ones not indicated in the original pdf manual) ?

Pete WK8S

1185. Re: QBSA - Changes /Mods ??

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-05-22 13:59:25 UTC
From: w1mt
Topic: 1184 Message: 1185

Check the archives for messages number 592 and 864.

-mike/w1mt

--- In AT_Sprint@yahoogroups.com, "phm7744" <pmeier@...> wrote:

> I'm about to start construction of the QBSA kit. Are there changes or
> mods I should consider adding while I build (ones not indicated in the
> original pdf manual) ?
>

1186. Re: ATS3A built and for sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-05-22 19:48:52 UTC
From: w4mjt
Topic: 402 Message: 1186

--- In AT_Sprint@yahoogroups.com, "Glenn Maclean" <wa7spy@...> wrote:
>
> I have an ATS3A built in a clear plastic enclosure for sale. Includes
> all 4 band modules built. Rig works great on all bands! The clear
> plastic case is large enough to store paddle, band modules, battery
> pack, and ear bud head phones. I am asking $175.00 plus shipping from
> 95817 zip. I need the funds for another project.
>
> Thanks,
> Glenn WA7SPY
>

Glenn,
Have you sold the ATS 3A yet? If not I am interested.

Furman Doty w4mjt

1187. Re: QBSA - Changes /Mods ??

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-05-24 17:24:15 UTC
From: radio_kx0r
Topic: 1184 Message: 1187

Pete,

Please see Steve's post # 851 as well as # 592 & # 864 (per Mike M1MT). If your QBSA kit is recent, you may not need to worry about the display freezing (#851), since Steve fixed the firmware.

If you know what you're doing and like taking risks, you can modify your QBSA to give a maximum output of 12V instead of 11V. This will let the ATS rig deliver close to 5W, but it's risky. Steve chose 11V for a reason - he doesn't want you to damage your rig. If you run on 12V, you must have an accurate 50 ohm load (which the QBSA will tell you). It's also smart to do any tuning of antennas or matching networks at low voltage. Use a tuner like the BLT that has a resistive bridge, so your ATS rig is not subjected to severe mismatch during tuning. Read the relevant parts of Steve's ATS manual carefully.

I have a post in the FILES section describing a way to get 12V from the QBSA, but if you understand 3-terminal regulators like the LM317T, you just change the components in the ADJ terminal circuit to get what you want. You can tailor the voltage range as you like. If you run on 12.0V, you'll need to supply 15.0V or more (under full load) to the QBSA power input to avoid regulator dropout. You should check for this.

There also are keying issues discussed on numerous other posts here. The keying issues get worse as the supply voltage is raised above 11V, and I don't recommend you run on 12V, unless you modify the keying circuit in your rig.

These various mods are slightly technical, so you probably should just leave everything the way Steve intended, unless you like tweaking things and have perfectionist tendencies.

The QBSA is a really nice unit and an amazing value for the features it provides. I put mine in an extra BLT case I happened to buy when they were still available separate from the BLT. It is quite snug in there. There is more work required to drill and fit the case than to assemble the QBSA itself. Plan your case construction somewhat before you start soldering your QBSA.

I think you'll be delighted with your QBSA if you work carefully!

Good luck - 72/73
KX0R

--- In AT_Sprint@yahoogroups.com, "phm7744" <pmeier@...> wrote:
>

> Hi all,
> I'm about to start construction of the QBSA kit. Are there changes or
> mods I should consider adding while I build (ones not indicated in
the
> original pdf manual) ?
>
> Pete WK8S
>

1188. 12V Operation of ATS Rigs

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-05-25 19:28:31 UTC
From: radio_kx0r
Topic: 1188 Message: 1188

I'm wondering how many other ATS-rig operators run on a 12V supply?

This question has come up in relation to the QBSA, which normally goes up to 11V. We also touched on this when we discussed the keying issues that appear at the high end of the supply range.

Has anyone damaged their rig running at 12V or higher (shudder). When I run at 12V the output mosfets get warm, and so do the toroids in the output filter, especially on 20M. This is with a verified 50 ohm load. I can see the output drop on the QBSA as I hold the key down. (I try not to do that often.)

Has anyone run at 12V for a long time with no issues? I've put some time on my finals, but not as much as some of you.

Please post any comments pro and con...

72/73

KX0R

1189. Re: [AT_Sprint] 12V Operation of ATS Rigs

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-05-25 19:45:53 UTC
From: Michael Harnage
Topic: 1188 Message: 1189

Mine generally get run at 11.1V, 9.6v or 7.4v. I have
run them at 12v or even higher when fresh 8 x 1.5AA
are used, but usually not for long. Have not had a
problem yet.

-mike/w1mt

--- radio_kx0r <careyfuller@...> wrote:

> I'm wondering how many other ATS-rig operators run
> on a 12V supply?
>

_____Take
the Internet to Go: Yahoo!Go puts the Internet in your pocket: mail, news, photos & more.
http://mobile.yahoo.com/go?refer=1GNXIC

1190. Re: 12V Operation of ATS Rigs

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-05-26 17:27:12 UTC
From: Tim Keene
Topic: 1188 Message: 1190

I use 6 Hawker Energy Cyclon sealed lead-acid 2volt 2.5AH batteries which gives me 12.5-12.6 volts. I have not encoutered any problems whatsoever. My particular rig does not put out quite 5 watts but it does into the mid 4 watts, depending on the band and freq. Use this info for what it's worth, but It works for me.
Tim - K5DEZ

--- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@...> wrote:
>
> I'm wondering how many other ATS-rig operators run on a 12V supply?
>
>
>

1191. 11.7 Volts from Lithium Ion Cells?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-05-31 22:54:08 UTC
From: Hank Greeb
Topic: 1188 Message: 1191

Has anyone used 3 Lithium Ion or Lithium Polymer cells? These have 3.7 volts each, and 3 of them would have 11.1 Volts.

They have a tricky charge cycle, but if you treat them right they last a very long time. They're used extensively for model airplanes, Cell Phones, laptop computers, etc.

72 de n8xx Hg

1192. New to the list

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-05-31 23:43:08 UTC
From: Stephen Clark
Topic: 1192 Message: 1192

Good morning,
I am new to list. I own an ATS II (I did not build it) and I am located in the Marshall Islands. I am going to attempt and build the ATS 3b when it comes out. I am a little intimidated by the SMT parts. I am also interested in purchasing an ATS 3 or 3a already built or in kit form. Thanks for the bw and have a great weekend.

72/73
Steve Clark
V73CS/N4TKP
Majuro, Marshall Islands

Pinpoint customers who are looking for what you sell.
http://searchmarketing.yahoo.com/

1193. SMD can be fun. AL7FS article on the ATS2

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-05-31 23:51:28 UTC
From: Jim Larsen - AL7FS
Topic: 1192 Message: 1193

Steve, the SMD was a lot of fun on my ATS2. You might enjoy my article on the ATS2 project. Go to:
http://www.al7fs.us/AL7FS5ATSprint2.html

I sold my ATS2 and now have to "get off the dime" and build my ATS3 (not the a version). I liked the plain ATS3 as it can be used to check into a SSB net...at least I think it can. We shall see.

Best of luck. Remember...one part at a time and the project is simple.

73, Jim
Jim Larsen
Anchorage, Alaska
http://www.AL7FS.us/

Stephen Clark wrote:
I am
> going to attempt and build the ATS 3b when it comes
> out. I am a little intimidated by the SMT parts.

1194. Re: [AT_Sprint] New to the list

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-05-31 23:56:38 UTC
From: Terry WAØITP
Topic: 1192 Message: 1194

Hello Steve, V73CS/N4TKP

Welcome to the list. I built the ATS-2 and liked it a lot. It was my first "big" smd project. I liked the -2 so well that I built the -3. Like you and many others, I'm awaiting the 3B. You will find sincere answers to your questions, as well as great tips, and ATS information on this list. Welcome aboard.

I love this radio stuff!
72 73
Terry, WA?ITP
http://www.wa0dx.org/wa0itp
http://www.wa0dx.org
http://www.4sqrp.com/

----- Original Message -----
From: Stephen Clark
To: AT_Sprint@yahoogroups.com
Sent: Thursday, May 31, 2007 6:43 PM
Subject: [AT_Sprint] New to the list

Good morning,
I am new to list. I own an ATS II (I did not build it) and I am located in the Marshall Islands. I am going to attempt and build the ATS 3b when it comes out. I am a little intimidated by the SMT parts. I am also interested in purchasing an ATS 3 or 3a already built or in kit form. Thanks for the bw and have a great weekend.

72/73
Steve Clark
V73CS/N4TKP
Majuro, Marshall Islands

Pinpoint customers who are looking for what you sell.
http://searchmarketing.yahoo.com/

No virus found in this incoming message.
Checked by AVG Free Edition.
Version: 7.5.472 / Virus Database: 269.8.4/825 - Release Date: 5/30/2007 3:03 PM

1195. RE: [AT_Sprint] New to the list

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-01 00:07:30 UTC
From: Rob May
Topic: 1192 Message: 1195

Hi Steve,
You don't have to hand solder the parts. Check out these websites. You can mount all the parts with soldering paste and "bake" the board in a toaster oven! I personally haven't tried this because hand soldering SMT parts is very relaxing for me, I much prefer it over through-hole parts, no flipping the board over and no clipped off leads to deal with.

http://www.zianet.com/erg/SMT_Soldering.html
http://www.hpsdr.com/Public/Projects/SMT/SMT.html

I've built two ATS-3A's (sold one and built one for another ham) and one ATS-3 (currently own), I will build the '3B when it comes out. I say go for it whether you intent to hand solder or bake, you'll be glad you did. It's fun to show the radio to your friends and watch them ooh and aah at your ability to build with such tiny components. Just don't tell them it's not that hard and fun too.
Rob
NV5E

>From: Stephen Clark <clarkmvimi@...>
>Reply-To: AT_Sprint@yahoogroups.com
>To: AT_Sprint@yahoogroups.com
>Subject: [AT_Sprint] New to the list
>Date: Thu, 31 May 2007 16:43:08 -0700 (PDT)
>
>Good morning,
> I am new to list. I own an ATS II (I did not build
>it) and I am located in the Marshall Islands. I am
>going to attempt and build the ATS 3b when it comes
>out. I am a little intimidated by the SMT parts. I
>am also interested in purchasing an ATS 3 or 3a
>already built or in kit form. Thanks for the bw and
>have a great weekend.
>
>72/73
>Steve Clark
>V73CS/N4TKP
>Majuro, Marshall Islands
>
>
>
>
>_____
>Pinpoint customers who are looking for what you sell.
>http://searchmarketing.yahoo.com/

PC Magazine?s 2007 editors? choice for best Web mail?award-winning Windows Live Hotmail.
http://imagine-windowslive.com/hotmail/?locale=en-us&ocid=TXT_TAGHM_migration_HM_mini_pcmag_0507

1196. Re: [AT_Sprint] SMD can be fun. AL7FS article on the ATS2

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-01 00:10:03 UTC
From: Terry WAØITP
Topic: 1192 Message: 1196

Hi Jim and all,
I've used -3 to work crossmode, checking into the special event station at Oshlosh. Great fun and it works well. The offset is adjusted automatically. Just tune in the ssb signal and the transmitted cw is right on freq.. I hope Steve retains this capability in the 3B.

Good to hear from you Jim, C'Mon Sunspots!!

I love this radio stuff!
72 73
Terry, WAØITP
http://www.wa0dx.org/wa0itp
http://www.wa0dx.org
http://www.4sqrp.com/

----- Original Message -----
From: Jim Larsen - AL7FS
To: AT_Sprint@yahoogroups.com
Sent: Thursday, May 31, 2007 6:51 PM
Subject: [AT_Sprint] SMD can be fun. AL7FS article on the ATS2

Steve, the SMD was a lot of fun on my ATS2. You might enjoy my article on the ATS2 project. Go to:
http://www.al7fs.us/AL7FS5ATSprint2.html

I sold my ATS2 and now have to "get off the dime" and build my ATS3 (not the a version). I liked the plain ATS3 as it can be used to check into a SSB net...at least I think it can. We shall see.

Best of luck. Remember...one part at a time and the project is simple.

73, Jim
Jim Larsen
Anchorage, Alaska
http://www.AL7FS.us/

Stephen Clark wrote:
I am
> going to attempt and build the ATS 3b when it comes
> out. I am a little intimidated by the SMT parts.

No virus found in this incoming message.
Checked by AVG Free Edition.
Version: 7.5.472 / Virus Database: 269.8.4/825 - Release Date: 5/30/2007 3:03 PM

1197. Re: [AT_Sprint] 11.7 Volts from Lithium Ion Cells?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-01 00:50:20 UTC
From: Michael Harnage
Topic: 1188 Message: 1197

Yep, many of us have.

-mike/w1mt

--- Hank Greeb <n8xx@...> wrote:

> Has anyone used 3 Lithium Ion or Lithium Polymer
> cells?

_____
TV dinner still cooling?
Check out "Tonight's Picks" on Yahoo! TV.
http://tv.yahoo.com/

1198. Re: [AT_Sprint] 11.7 Volts from Lithium Ion Cells?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-01 02:32:57 UTC
From: Hank Greeb
Topic: 1188 Message: 1198

Thanks! Any specific type, maH, etc? Is there much difference in power output with 11.1 volts vs 12 volts?

How many operating hours can one get from a bank of cells which will fit in a second Altoids tin?

72 de n8xx Hg

Michael Harnage wrote:
>
> Yep, many of us have.
>
> -mike/w1mt
>
> --- Hank Greeb <n8xx@... <mailto:n8xx%40arrl.org>> wrote:
>
> > Has anyone used 3 Lithium Ion or Lithium Polymer
> > cells?
>
>

1199. Re: [AT_Sprint] New to the list

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-01 03:59:20 UTC
From: David D. Meacham
Topic: 1192 Message: 1199

Steve,
I built my ATS-3 at age 73 using no special tools or aids other than reading glasses and an OptiVISOR (flip-up, head-band magnifier). Oh, I also used a toothpick and very fine solder (I think it was 15 mil). Of course, you need fine tweezers, too. Be careful not to blow or sneeze on the work as the chips will fly away if you do. You'll love the rig when you get it done!
72, Dave, W6EMD, Redwood City, CA

1200. Re: [AT_Sprint] 11.7 Volts from Lithium Ion Cells?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-01 06:08:11 UTC
From: Vojtěch Bubník
Topic: 1188 Message: 1200

I use just two cells pack of LiPols, that is sold in model shops to power airplanes. ATS-3 gives about 2W, the finals are cold and I am on the safe side.
73, Vojtech OK1IAK

> ------------ Původní zpráva ------------
> Od: Michael Harnage <w1mt@...>
> Předmět: Re: [AT_Sprint] 11.7 Volts from Lithium Ion Cells?
> Datum: 01.6.2007 02:57:09
> --
> Yep, many of us have.
>
> -mike/w1mt
>
> --- Hank Greeb <n8xx@...> wrote:
>
> > Has anyone used 3 Lithium Ion or Lithium Polymer
> > cells?
>
>
>
> _____
> TV dinner still cooling?
> Check out "Tonight's Picks" on Yahoo! TV.
> http://tv.yahoo.com/
>
>
>

1201. RE: [AT_Sprint] 11.7 Volts from Lithium Ion Cells?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-01 13:19:23 UTC
From: andrew.macallister@emersonprocess.com
Topic: 1188 Message: 1201

Both my ATS3 and ATS3A are now on two LiPo packs running a max V of around 8V. My ATS3 ran for 2 years on three LiPo packs - no problems. They were 300 maH. When I finally zapped one, I went for two 650 maH packs - in the Altoids box with the xmtr. I get about 3W out most of the time, and that's PLENTY. My ATS3A uses 200 maH packs to save weight for the Spartan Sprint, which I won in March and April. As long as I don't call CQ too much, the 200 maH packs run solid for two hours.

Andy W5ACM

-----Original Message-----
From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com] On Behalf Of Vojtech Bubník
Sent: Friday, June 01, 2007 1:08 AM
To: AT_Sprint@yahoogroups.com
Subject: Re: [AT_Sprint] 11.7 Volts from Lithium Ion Cells?

I use just two cells pack of LiPols, that is sold in model shops to power airplanes. ATS-3 gives about 2W, the finals are cold and I am on the safe side.
73, Vojtech OK1IAK

> ------------ Původní zpráva ------------
> Od: Michael Harnage <w1mt@...>
> Předmět: Re: [AT_Sprint] 11.7 Volts from Lithium Ion Cells?
> Datum: 01.6.2007 02:57:09
> --
> Yep, many of us have.
>
> -mike/w1mt
>
> --- Hank Greeb <n8xx@...> wrote:
>
> > Has anyone used 3 Lithium Ion or Lithium Polymer
> > cells?
>
>
>
> _____
> TV dinner still cooling?
> Check out "Tonight's Picks" on Yahoo! TV.
> http://tv.yahoo.com/
>
>
>

Yahoo! Groups Links

1202. Self-resetting Overcurrent Protector

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-01 14:20:10 UTC
From: KB2TQX, Dave
Topic: 1202 Message: 1202

These solid state, self-resetting overcurrent protectors look ideal
for the ATS3. I think they would be ideal companions for Li-Po packs
where srious currents could flow.

http://www.allelectronics.com/cgi-bin/item/RXE-065/search/RESETTABLE_CIRCUIT_PROTECTOR_0.65_-_1.3_AMP_.html

Dave

1203. Re: 11.7 Volts from Lithium Ion Cells?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-01 15:15:34 UTC
From: w1mt
Topic: 1188 Message: 1203

Hank,

I have used a 950 mAh 3-cell packs and gotten in excess of 6 hours from them. I get a full two hours from 2-cell 250mAh packs for the Sprints. I haven't played serious in the sprints for a while but those 25mAh packs are ideal for two hours.

One thing I would highly recommend for a non Spartan Sprint pack is getting packs that have balancing capability. Then use either a balancer with your charger or use a special charger that can handle the balancing directly. Obviously for the sprints you probably don't want the extra weight of a balancing port.

My personal opinion is that the 3-cell packs are about as much voltage that I want to power an ATS unit with.

Hope this data point helps...

-mike/w1mt

--- In AT_Sprint@yahoogroups.com, Hank Greeb <n8xx@...> wrote:
>
> Thanks! Any specific type, maH, etc? Is there much difference in power
> output with 11.1 volts vs 12 volts?
>
> How many operating hours can one get from a bank of cells which will fit
> in a second Altoids tin?
>

1204. Re: 11.7 Volts from Lithium Ion Cells?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-01 18:19:46 UTC
From: radio_kx0r
Topic: 1188 Message: 1204

Hank,

I run my ATS-3A on 3 lithium ion cells, which give a maximum voltage, fully charged, of just over 12V. These are CGR 18650C cells rated at about 2150 mAH. I employ a protection circuit (commercial PCB) and a polyswitch. Charging is done by a voltage-regulated, current-limited charger.

If you use lithium-ion or lithium-polymer you should read the data sheet for the batteries you choose, and follow the various recommendations. Be sure your battery pack contains a protection circuit to prevent overcharging, overdischarging, and overcurrent.

The CGR 18650 cells are used in many notebook computers and will provide more operating time than you probably need with your ATS-3A. They are too large and heavy for the sprints, where you might care about size and weight. However, three cells would be fine for serious hiking or backpacking where you want quite a few hours of QSO time.

The ATS-3 amd 3A need to be modified a bit to deliver nice keying waveforms at 12V supply. There are a lot of other posts and files here to help with that.

Another real nice combination is 8 AA NiMH cells, which will give over 10V fully charged, and about 9.6V over most of the discharge. These are cheap and widely available at about 2500 mAH. If you make your own pack, get cells with tabs. AAA cells are also available at about 1000 mAH. They all need a special charger for best results, but they are not as picky as lithium ion cells. The ATS radios have more safety factor when run below 10V.

Good luck -

KX0R
>
> Thanks! Any specific type, maH, etc? Is there much difference in power
> output with 11.1 volts vs 12 volts?
>
> How many operating hours can one get from a bank of cells which will fit
> in a second Altoids tin?
>
> 72 de n8xx Hg
>
> Michael Harnage wrote:

> >
> > Yep, many of us have.
> >
> > -mike/w1mt
> >
> > --- Hank Greeb <n8xx@... <mailto:n8xx%40arrl.org>> wrote:
> >
> > > Has anyone used 3 Lithium Ion or Lithium Polymer
> > > cells?
> >
> >
>

1205. Re: 11.7 Volts from Lithium Ion Cells?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-01 18:30:11 UTC
From: Dave
Topic: 1188 Message: 1205

> Is there much difference in power output with 11.1 volts vs 12
> volts?

Expect the power output to be roughly proportional to the square of the voltage. 12V would give you about 16% more power than 11.1V, maybe 0.75W more.

Dave

1206. Re: Self-resetting Overcurrent Protector

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-01 18:25:50 UTC
From: Dave
Topic: 1202 Message: 1206

>
http://www.allelectronics.com/cgi-bin/item/RXE-065/search/RESETTABLE_CIRCUIT_PROTECTOR_0.65_-_1.3_AMP_.html

The biggest issues with these are the Rmin of 0.31 ohms (a tenth of a volt or two drop in our application during Tx) and they recover to a bit higher Rmin after tripping. But they certainly would provide a measure of protection and the automatic reset would be handy in a field environment.

Dave

1207. Re: [AT_Sprint] Re: 11.7 Volts from Lithium Ion Cells?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-01 19:07:38 UTC
From: Stephen Clark
Topic: 1188 Message: 1207

First of all thanks for all of the welcomes and
encouragement upon joining the list. I appreciate it.

I have been looking at Lithium Ion Cells for portable
use here in the islands. In the conditions here I am
wondering if (in my case) Nimh would be better. I am
thinking of life of the battery over time (number of
recharges and durability). I also had heard from an
R/C buddy of mine that the Lithium Ion cells can
overheat and burn? Has anyone had any experience with
that type of problem?

72/73
Steve
V73CS

Be a better Globetrotter. Get better travel answers from someone who knows. Yahoo! Answers
- Check it out.
http://answers.yahoo.com/dir/?link=list&sid=396545469

1208. RE: [AT_Sprint] Re: 11.7 Volts from Lithium Ion Cells?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-01 19:36:05 UTC
From: andrew.macallister@emersonprocess.com
Topic: 1188 Message: 1208

Hi Steve,

No. The ones that went "south" on me simply puffed up. This occurred because I do not have any protection circuitry, they were aging, and I ran them down too low. This has only occurred on the 200 and 300 maH LiPo's. None of my larger batteries have yet to fail.

Andy W5ACM

From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com] On Behalf Of Stephen Clark
Sent: Friday, June 01, 2007 2:08 PM
To: AT_Sprint@yahoogroups.com
Subject: Re: [AT_Sprint] Re: 11.7 Volts from Lithium Ion Cells?

First of all thanks for all of the welcomes and encouragement upon joining the list. I appreciate it.

I have been looking at Lithium Ion Cells for portable use here in the islands. In the conditions here I am wondering if (in my case) Nimh would be better. I am thinking of life of the battery over time (number of recharges and durability). I also had heard from an R/C buddy of mine that the Lithium Ion cells can overheat and burn? Has anyone had any experience with that type of problem?

72/73
Steve
V73CS

Be a better Globetrotter. Get better travel answers from someone who knows. Yahoo! Answers - Check it out.
http://answers.yahoo.com/dir/?link=list&sid=396545469
<http://answers.yahoo.com/dir/?link=list&sid=396545469>

1209. Re: 11.7 Volts from Lithium Ion Cells?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-02 13:25:16 UTC
From: John Harper
Topic: 1188 Message: 1209

Hi Steve,

I use LiPos exclusively in my QRP rigs when operating portable. If you decide to use NiMH AA's instead, keep in mind that you will need more cells to provide a given voltage than with any other AA-from factor chemistry. I've compared a few battery types here: http://www.ae5x.com/compare%20mAh.htm

Regarding the potential for overheating/burning in LiPo cells, most of the cases where this has occurred have been in R/C applications where the battery is supplying current at or near its peak rated output. I have a motor (http://www.hobby-lobby.com/brushless-uberall.htm) that pulls 18 amps from my the same make and model LiPo battery (2100 mAH) that I often use with my KX1. Its max discharge rate is 31A (50A intermittent) and does get warm in R/C use but when powering the KX1, I doubt the battery even knows it's being used.

73,

John Harper AE5X
http://www.ae5x.com

--- In AT_Sprint@yahoogroups.com, Stephen Clark <clarkmvimi@...> wrote:
>
> I have been looking at Lithium Ion Cells for portable
> use here in the islands. In the conditions here I am
> wondering if (in my case) Nimh would be better. I am
> thinking of life of the battery over time (number of
> recharges and durability). I also had heard from an
> R/C buddy of mine that the Lithium Ion cells can
> overheat and burn? Has anyone had any experience with
> that type of problem?
>

1210. Re: [AT_Sprint] Re: 11.7 Volts from Lithium Ion Cells?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-01 13:49:46 UTC
From: Richard McKee
Topic: 1188 Message: 1210

Anyone know of a good source for individual lithium ion cells for
rebuilding battery packs ?

Rick McKee, KC8AON, Ohio - www.angelfire.com/electronic2/qrp
Monthly QRP Field Day Group - http://groups.yahoo.com/group/MQFD/
With God all things are possible <><

1211. Re: [AT_Sprint] Re: 11.7 Volts from Lithium Ion Cells?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-02 14:05:47 UTC
From: Karl Larsen
Topic: 1188 Message: 1211

Hi Gang, I use LiPos in my Yaesu VX2R HT and my laptop and my cell phone. What do these devices have in common? They have a chip inside them that charges the LiPos battery. You put in 5 Volts DC about and the chip sets the charge rates.

For my radios I use NiMH AA cells. I run 12 volts to my ATS-3 from 10 of the AA cells in a nice Mouser battery case. These 2200 mAH cells will run a ATS-3 all day in a contest.

I recommend the NiNH AA cells because Wal Mart sells a charger that works in your car or home, charges 4 at once and costs $18.00. They are Grey in color and do fast charge with real success.

Have Fun, 73 Karl K5DI

John Harper wrote:
> Hi Steve,
>
> I use LiPos exclusively in my QRP rigs when operating portable. If you
> decide to use NiMH AA's instead, keep in mind that you will need more
> cells to provide a given voltage than with any other AA-from factor
> chemistry. I've compared a few battery types here:
> http://www.ae5x.com/compare%20mAh.htm
>
> Regarding the potential for overheating/burning in LiPo cells, most of
> the cases where this has occurred have been in R/C applications where
> the battery is supplying current at or near its peak rated output. I
> have a motor (http://www.hobby-lobby.com/brushless-uberall.htm) that
> pulls 18 amps from my the same make and model LiPo battery (2100 mAH)
> that I often use with my KX1. Its max discharge rate is 31A (50A
> intermittent) and does get warm in R/C use but when powering the KX1,
> I doubt the battery even knows it's being used.
>
> 73,
>
> John Harper AE5X
> http://www.ae5x.com
>
>

1212. Re: [AT_Sprint] Re: 11.7 Volts from Lithium Ion Cells?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-01 14:17:24 UTC
From: Richard McKee
Topic: 1188 Message: 1212

I recommend the NiNH AA cells because Wal Mart sells a charger that works in your car or home, charges 4 at once and costs $18.00. They are Grey in color and do fast charge with real success. [snip]

Hello Karl and Gang,
I use a 12 volt 2.3 aH gell cell for my QRP rigs - it can be charged direct from the cigar lighter socket in my car and no special charger needed. I do like the NiMH batteries though - they are fairly lightweight. Been wanting to build up a few 9.6 volt packs and a charger for them to use with my Icom 703 but never have tarted rounding up the parts - oh well, maybe one day ! Anyone know of a schematic for a simple 9.6 volt NiMH charger ?

Rick McKee, KC8AON, Ohio - www.angelfire.com/electronic2/qrp
Monthly QRP Field Day Group - http://groups.yahoo.com/group/MQFD/
With God all things are possible <><

1213. RE: [AT_Sprint] Re: 11.7 Volts from Lithium Ion Cells?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-02 20:19:23 UTC
From: andrew.macallister@emersonprocess.com
Topic: 1188 Message: 1213
Attachments: 1 described; binary payloads are missing from this source WARC

http://www.batteriesamerica.com

One of my favorites for many years - used to be "Mr. NiCAD", also known as E. H. Yost.

GL! de Andy W5ACM

From: AT_Sprint@yahoogroups.com on behalf of Richard McKee
Sent: Fri 6/1/2007 8:49 AM
To: AT_Sprint@yahoogroups.com
Subject: Re: [AT_Sprint] Re: 11.7 Volts from Lithium Ion Cells?

Anyone know of a good source for individual lithium ion cells for
rebuilding battery packs ?

Rick McKee, KC8AON, Ohio - www.angelfire.com/electronic2/qrp
Monthly QRP Field Day Group - http://groups.yahoo.com/group/MQFD/
<http://groups.yahoo.com/group/MQFD/>
With God all things are possible <><

1214. Re: 11.7 Volts from Lithium Ion Cells?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-03 20:44:58 UTC
From: radio_kx0r
Topic: 1188 Message: 1214

Most of the major manufacturers of lithium ion cells prevent their distributors from selling individual cells, because of risks and liability issues. Lithium ion cells can store and deliver enough energy to cause fires and injury, if they're not managed correctly. Some of the cells available at various battery sellers on the internet may come from lesser manufacturers overseas, and they may carry more risks than the cells from the big guys. Be sure you use a protection circuit for any pack you build.

There are several suppliers of lithium polymer (LiPO) packs on the internet, and most of these are sold for R/C (model radio control) hobbies. These batteries have great specs and are favored for competitive R/C applications like high-performance airplanes. They are way better than what you need for a QRP rig, and the prices are reasonable for the smaller packs. Be sure you use a charger designed to charge whatever battery you use. Lithium packs must not be overcharged, over-discharged, reversed, or discharged at too high a rate. Read the fine print and don't cheat. Always charge in a safe place, away from flammable material, with a safe charger. Think about what might happen if the power goes off during charge with no one around; will the battery dump into your charger and burn something up? Don't even think about using clip leads or open wires connected to a lithium pack - it's too easy to have a short-circuit accident. Polyswitches can prevent a lot of trouble.

When we take radios to the field, more problems happen - connectors get stressed, radios misbehave, matching circuits don't match, we sometimes forget to connect the antenna, the antenna falls down, we plug in the wrong plug in the wrong hole, clip leads somehow get reversed, etc. Please be sure to protect your radio from accidents - the one or two tenths of a volt that a polyswitch takes when the key is down will never be missed, but good batteries can take out your finals and even the traces on your pcb if there's no protection.

Many of the accidents that have happened with lithium ion cells have occurred when people were building or rebuilding battery packs. Think about how easy it is to have a short circuit with perhaps 100 amps flowing, just because you slipped with a soldering iron and bridged a couple of points in the cramped space of a battery pack. What if you goof in the part of the wiring that's not protected? If you choose to do this, read up on it first, and use discipline so you leave little to chance. Most of what you read will be full of warnings and disclaimers. It's probably just as dangerous to work on a lithium ion pack as it is to work on your house wiring.

Please be careful...

KX0R

--- In AT_Sprint@yahoogroups.com, Richard McKee <QRP_1@...> wrote:
>
> Anyone know of a good source for individual lithium ion cells for
> rebuilding battery packs ?
>
> Rick McKee, KC8AON, Ohio - www.angelfire.com/electronic2/qrp
> Monthly QRP Field Day Group - http://groups.yahoo.com/group/MQFD/
> With God all things are possible <><
>

1215. Re: [AT_Sprint] Re: 11.7 Volts from Lithium Ion Cells?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-03 22:10:10 UTC
From: Richard McKee
Topic: 1188 Message: 1215

Most of the major manufacturers of lithium ion cells prevent their distributors from selling individual cells, because of risks and liability issues. Lithium ion cells can store and deliver enough energy to cause fires and injury, if they're not managed correctly. Some of the cells available at various battery sellers on the internet may come from lesser manufacturers overseas, and they may carry more risks than the cells from the big guys. Be sure you use a protection circuit for any pack you build. [snip]

Well, I was wanting the cells to rebuild an existing pack - an old laptop battery pack to be exact. Would the lithium polymer cells be compatible in this application ? The laptop is an old one and on its way in shipment. It will be used for amateur radio applications only and I don't want to spend a bunch on it. The battery pack isn't all that important as long as it will run on the AC adapter, but having battery capability would be nice if I can do it without spending a fortune. I have noticed that some of the AC adapters for laptops are rated at 12 volts. Has anyone ever tried running a laptop on a 12 volt battery plugged direct into the power jack ? Sounds logical or am I missing soemthing here ?

Rick McKee, KC8AON, Ohio - www.angelfire.com/electronic2/qrp
Monthly QRP Field Day Group - http://groups.yahoo.com/group/MQFD/
With God all things are possible <><

1216. Re: 11.7 Volts from Lithium Ion Cells?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-04 03:56:11 UTC
From: radio_kx0r
Topic: 1188 Message: 1216

Rick,

I doubt that the lithium polymer cells would replace lithium ion in an older pack, because they have different shapes, often flat and rectangular instead of cylindrical cells. You might be able to substitute a complete pack if you find something that will fit or plug in with a cable. The voltages must match closely, but you might be able to do that.

If the computer is designed to run on a voltage range that includes 12 volts, you might be able to run on a 12 volt battery. You should be OK if you match the voltage the AC adapter puts out. All the lithium packs function over a moderately wide range, usually about 4.2V down to 3.0V per cell. This means a 3-cell pack would deliver about 12.6V fully charged, dropping to about 9.0V at the end of safe discharge. These voltages differ among various cell chemistries, so you have to read the data sheets for the batteries you have.

I think rebuilding a pack is dangerous. It's very easy to create a short with your pliers and other tools. A careless short circuit might weld instantly....then you have to run, because things will get too hot and something bad will happen real fast! The problem is that the cells are always on, and you can't safely discharge them to work on them. If you discharge the cells well below 3V, they may be permanently damaged. You might be smart to work outdoors and wear safety glasses if you choose to work on any lithium packs.

The people who build packs do it according to procedures that minimize errors and risks. They know their game.

It might be smart to use the services of someone who knows how to service lithium packs, instead of taking such large risks.

KX0R

> Well, I was wanting the cells to rebuild an existing pack - an old laptop
> battery pack to be exact. Would the lithium polymer cells be compatible
> in this application ? The laptop is an old one and on its way in
> shipment. It will be used for amateur radio applications only and I
> don't want to spend a bunch on it. The battery pack isn't all that
> important as long as it will run on the AC adapter, but having battery
> capability would be nice if I can do it without spending a fortune. I
> have noticed that some of the AC adapters for laptops are rated at

12
> volts. Has anyone ever tried running a laptop on a 12 volt battery
> plugged direct into the power jack ? Sounds logical or am I missing
> soemthing here ?
>
> Rick McKee, KC8AON, Ohio - www.angelfire.com/electronic2/qrp
> Monthly QRP Field Day Group - http://groups.yahoo.com/group/MQFD/
> With God all things are possible <><
>

1217. rechargable lithium batteries

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-04 17:33:40 UTC
From: jerry
Topic: 1217 Message: 1217

whats a polyswitch?
tnx
aa1of

1218. Re: rechargable lithium batteries

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-04 23:34:58 UTC
From: radio_kx0r
Topic: 1217 Message: 1218

Jerry,

A PolySwitch is a kind of resettable fuse. It's also a thermsitor with a really steep curve. It has a low resistance at low current. If enough current flows through it, above its threshold, it heats up, raises its resistance several orders of magnitude, and the current drops to a low value. It resets if the power supply volatge is removed.

These are used in battery packs, in radios, and in automotive electrical systems to control shorts or excessive currents. Some people use them to protect speakers from burnout, in case someone cranks up an amp too high or goofs otherwise. They are cheap and effective, but you have to choose one that matches the voltage and current you want to protect. The polyswitch should be rated to carry at least twice the normal operating current to avoid tripping when nothing's wrong. If you select too high a current rating, it won't trip fast enough when you need it to protect. It's a judgment call, just like with a fuse.

Here's a link to one of the manufacturers' sites:

http://circuitprotection.com/polyswitch.asp

They have some resistance, but so do fuses and fuseholders. They'll save your day when you goof up and short some power leads together.

It's easy to wire one in series with the B+ line of your QRP rig. I put one in my ATS3-A, right on the board. I had to cut a trace and solder it onto the two leads.

These are available from various distributors in both through-hole and SMT versions, with a wide range of ratings. They are epoxy-dipped and they look like ceramic capacitors. The ones made for battery packs are flat with ribbon leads meant for spot-welding when the packs are assembled.

You can play with them and verify that they work, but they should not be used for intentionally repeated tripping, since they degrade a bit if they're tripped often.

They're worth their cost if they even trip once...especially connected to a high-energy battery.

72/73
KX0R

--- In AT_Sprint@yahoogroups.com, "jerry" <ohwenzelph@...> wrote:
>

> whats a polyswitch?
> tnx
> aa1of
>

1219. FS: ATS-3 - fully assembled and ready to sprint

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-05 19:38:49 UTC
From: Greg
Topic: 1219 Message: 1219

FOR SALE: one fully assembled ATS-3 with the NR4E filter mod ($175 shipped CONUS).

I cannot believe I am parting with this jewel, but I have used it exactly TWICE in a year and a half. Also, I'm gathering my coins for a used, barebones K2 later this summer so I'm getting rid of a few toys.

I am the original owner and purchased the kit from Steven Weber, KD1JV in 2005. W1RT/John D'ausilio generously agreed to build it for me and did a beautiful job despite my pestering him to near death. It is enclosed in an Altoids mint tin and comes with all four (assembled) band modules and a power cord with Anderson power pole connectors.

Cashier's Check, Postal Money Order or Paypal. Send inquiries to me (not the group) at k4ko@charter.net

Thanks,

73

Greg Tomerlin K4KO
Lebanon, TN - EM66
k4ko@...

1220. Re: [AT_Sprint] FS: ATS-3 - fully assembled and ready to sprint

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-05 21:16:31 UTC
From: Hank Greeb
Topic: 1219 Message: 1220

Pardon me, but I'm a newbie to the ATS-3 - I've researched the 3a. I'm more than likely interested!

If it hasn't sold yet, tell me what the difference is between the 3 and the 3a.

If you don't wish to bother with a newbie, I'll understand. I'm prepared to send the price via paypal as soon as I understand what the difference is.

72 de n8xx Hg

Greg wrote:
>
> FOR SALE: one fully assembled ATS-3 with the NR4E filter mod ($175
> shipped CONUS).
>
> I cannot believe I am parting with this jewel, but I have used it
> exactly TWICE in a year and a half. Also, I'm gathering my coins for a
> used, barebones K2 later this summer so I'm getting rid of a few toys.
>
> I am the original owner and purchased the kit from Steven Weber, KD1JV
> in 2005. W1RT/John D'ausilio generously agreed to build it for me and
> did a beautiful job despite my pestering him to near death. It is
> enclosed in an Altoids mint tin and comes with all four (assembled)
> band modules and a power cord with Anderson power pole connectors.
>
> Cashier's Check, Postal Money Order or Paypal. Send inquiries to me
> (not the group) at k4ko@... <mailto:k4ko%40charter.net>
>
> Thanks,
>
> 73
>
> Greg Tomerlin K4KO
> Lebanon, TN - EM66
> k4ko@... <mailto:k4ko%40charter.net>
>
>

1221. Re: ATS-3 is SOLD

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-06 03:32:44 UTC
From: Greg
Topic: 1219 Message: 1221

The ATS-3 is spoken for. Thanks to all who inquired.

73 Greg K4KO

1222. ATS 3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-09 20:29:58 UTC
From: w4mjt
Topic: 1037 Message: 1222

When will we hear from Steve concerning the new rig ? I am getting itchy !!

1223. Re: [AT_Sprint] ATS 3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-09 21:38:37 UTC
From: Hank Greeb
Topic: 1037 Message: 1223

He's on the Appalachian Trail right now. He said it would be mid summer
the last I heard.

Hg

w4mjt wrote:
>
> When will we hear from Steve concerning the new rig ? I am getting
> itchy !!
>

1224. Re: [AT_Sprint] ATS 3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-09 22:11:46 UTC
From: Hank Greeb
Topic: 1037 Message: 1224

If you want to know of Steve's adventures on the trail, he's been
posting a blog whenever he gets to civilization:

http://www.trailjournals.com/entry.cfm?id=185968

That will get you to the most entry as of today.

73 de n8xx Hg

w4mjt wrote:
>
> When will we hear from Steve concerning the new rig ? I am getting
> itchy !!
>

1225. Re: ATS 3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-10 18:44:05 UTC
From: Andrew O. Ojwang
Topic: 1037 Message: 1225

Hello,

I will be looking out for the new ATS3b from Steve.

Looks like his enjoying his refreshing little bit piece of heaven.

Have done some of that, tough leg work, but extremely gratifying when over.

Andrew(5Z4FT/KI4LTH) :-(

--
This message has been scanned for viruses and
dangerous content by MailScanner, and is
believed to be clean.

1226. Re: [AT_Sprint] ATS 3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-10 21:16:31 UTC
From: Lee Boulineau
Topic: 1037 Message: 1226

I don't know - but I have my lab's new Leica
stereoscope ready to go (it's 7.5 to 15x
power)..... it should be easy to see the
board.....and I think I'll try Cash Olsen's
method on the main board, so it's a good thing that I
have a very good oven in the lab

Lee N4MVL

--- w4mjt <w4mjt@...> wrote:

> When will we hear from Steve concerning the new rig
> ? I am getting
> itchy !!
>
>

_____
Looking for a deal? Find great prices on flights and hotels with Yahoo! FareChase.
http://farechase.yahoo.com/

1227. Re: [AT_Sprint] ATS 3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-10 22:00:10 UTC
From: Karl Larsen
Topic: 1037 Message: 1227

Hi Lee I bought an electric one burner 120V heater and the thermostat is
a 200F. I have a pot on it and the ATS-3B goes in that.

73 Karl K5DI

Lee Boulineau wrote:
> I don't know - but I have my lab's new Leica
> stereoscope ready to go (it's 7.5 to 15x
> power)..... it should be easy to see the
> board.....and I think I'll try Cash Olsen's
> method on the main board, so it's a good thing that I
> have a very good oven in the lab
>
> Lee N4MVL
>
>
> --- w4mjt <w4mjt@...> wrote:
>
>
>> When will we hear from Steve concerning the new rig
>> ? I am getting
>> itchy !!
>>
>>
>>
>
>
>
>
> ---
> Looking for a deal? Find great prices on flights and hotels with Yahoo! FareChase.
> http://farechase.yahoo.com/
>
>
>
> Yahoo! Groups Links
>
>
>
>
>
>
>

1228. Re: [AT_Sprint] ATS 3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-10 22:09:43 UTC
From: bgriffin
Topic: 1037 Message: 1228

Two syringes of solder paste in the fridge, extra fine tips for
the soldering iron. One thing I am lacking, patience.

Bill, ni5x

> Hi Lee I bought an electric one burner 120V heater and the thermostat is
> a 200F. I have a pot on it and the ATS-3B goes in that.
>

1229. Re: [AT_Sprint] ATS 3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-10 22:18:35 UTC
From: Lee Boulineau
Topic: 1037 Message: 1229

Well,

I have a chemistry lab here with some real good
equipment, so I might as well use it. The Leica scope
will be real useful for board inspection and/or
repair. Dan Tayloe posted a bit about a USB
microscope that might work pretty well - I think it
was on the qrp-l group. You know, my magnetic
stirrer/hot plate combos here in the lab might work
pretty well - the heating is even and the ceramic top
gets quite hot.

Lee

--- bgriffin <bgriffin@...> wrote:

> Two syringes of solder paste in the fridge, extra
> fine tips for
> the soldering iron. One thing I am lacking,
> patience.
>
> Bill, ni5x
>
> > Hi Lee I bought an electric one burner 120V heater
> and the thermostat is
> > a 200F. I have a pot on it and the ATS-3B goes in
> that.
> >
>
>

Choose the right car based on your needs. Check out Yahoo! Autos new Car Finder tool.
http://autos.yahoo.com/carfinder/

1230. NAQCC June Sprint Spectacular

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-11 02:01:21 UTC
From: Larry Makoski
Topic: 1230 Message: 1230

This Tuesday evening, the North American QRP CW Club will be holding its monthly sprint.

Here are the particulars:

Date and time:
Wednesday, June 13th, 0030-0230 UTC
(Remember that's Tuesday evening here in the USA) That's 8:30 - 10:30 EDT, 7:30 - 9:30 CDT, 6:30 - 8:30 MDT and 5:30 - 7:30 PDT.

Bands - Frequencies:
80M - 3555-3565 kHz (Be courteous to FISTS operating on 3558 kHz)
40M - 7039-7050 kHz (Avoid W1AW on 7047.5 kHz).
20M - 14059-14065 kHz. General:
A particular station may be worked once on each band. Operate CW only. All licensed amateurs are invited to participate, but only those operating QRP (5 watts or less) are eligible for awards.

Call: CQ NA

Exchange:
RST - SPC (State Province or Country) - NAQCC Nr.
(non-Members substitute power level for NAQCC Nr., e.g. 5W, 1W, etc. Be sure to add the W.)

QSO Points:
QSO with a Member, 2 points.
QSO with a Non-member, 1 point.

Multipliers:
Each USA state
Each VE province
Each country except W/VE
All multipliers count only once in the contest.

Bonus:
If you use only a straight key for the entire sprint, multiply your score by 2.
If you use only a bug for the entire sprint, multiply your score by 1.5.
If you key with anything other than a straight key or bug, there is no bonus multiplier.

Categories:
SWA - simple wire antennas - for those using a simple wire antenna per NAQCC definition.
GAIN - gain antennas - for those using other than a simple wire antenna.

Special Award:
This month the top two NAQCC highest scorers in the Simple Wire Antennas category will win prizes! First place wins Dave Ingram's wonderful book, "The World of Keys" while the second highest placing NAQCC member will earn a copy of Dave's book, "Keys II: The Emporium". Dave K4TWJ is a 'card carrying" member of the NAQCC and we thank him for his generous donation of one of the books. The other book was procured using funds donated to the NAQCC.

REMEMBER: You HAVE to be a NAQCC member to be eligible to win one of the books; and there's still plenty of time to join before Tuesday night's sprint. To join the NAQCC, please visit:
http://www.arm-tek.net/~yoel//joinup.html

Entry Deadline:
All entries must be RECEIVED before 2400Z on June 19, 2007. So submit as soon as possible, especially regular mail entries.

For further information, please visit:
http://www.arm-tek.net/~yoel//sprintrules.html

73 de Larry W2LJ
NAQCC #35

1231. SMD/SMT concern

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-11 12:48:24 UTC
From: Andrew O. Ojwang
Topic: 1231 Message: 1231

Hello all,

I just noted the concern of several people regarding SMD/SMT soldering.

I have done SMD/SMT work before successfully the manual way, all
I need to make the work easier is another soldering iron with a
suitable ground , a fine solder tip, and table-top magnifying glass.
And of-course plenty of rest, exercise, and good food.

The CW issue has always been that the key I have is bad, given to me
from the ARSK in bad taste as well, and have to purchase my own
keyer, brass key, or bug.

The equipment was always loaned from ARSK to me in bad taste, so must
purchase, build my own equipment.

73,
5Z4FT/KI4LTH :-(

1232. Re: [AT_Sprint] SMD/SMT concern

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-11 13:49:39 UTC
From: Lee Boulineau
Topic: 1231 Message: 1232

There are some very simple key ideas on the web,
including using hacksaw blades, paper clips, and other
sundry items. Maybe you can fashion something workable
from some scrap metal.

GL es 73 de N4MVL Lee

--- "Andrew O. Ojwang" <ojwanga2@...> wrote:

> Hello all,
>
> I just noted the concern of several people regarding
> SMD/SMT soldering.
>
> I have done SMD/SMT work before successfully the
> manual way, all
> I need to make the work easier is another soldering
> iron with a
> suitable ground , a fine solder tip, and table-top
> magnifying glass.
> And of-course plenty of rest, exercise, and good
> food.
>
> The CW issue has always been that the key I have is
> bad, given to me
> from the ARSK in bad taste as well, and have to
> purchase my own
> keyer, brass key, or bug.
>
> The equipment was always loaned from ARSK to me in
> bad taste, so must
> purchase, build my own equipment.
>
> 73,
> 5Z4FT/KI4LTH :-(
>
>
>
>
>

Fussy? Opinionated? Impossible to please? Perfect. Join Yahoo!'s user panel and lay it on
us. http://surveylink.yahoo.com/gmrs/yahoo_panel_invite.asp?a=7

1233. Re: [AT_Sprint] SMD/SMT concern

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-11 19:03:59 UTC
From: Karl Larsen
Topic: 1231 Message: 1233

Hi Lee,

I purchased a $10.00 kit that uses Surface Mount parts and I
soldered it using The Cash Olsen method. Now the details are this:

1. It is as hard to put the SM parts into the paste as it is to get
a part and hold it long enough to manually solder it. You loose parts to
their ability to fly into space, and other problems.

1.1 At Wal Mart I found in the hobby shop a set of 4 tweezers that
are too good to be true! I think they cost like $8.00 and are the best
thing around for getting the part from a bowl to the board in another bowl.

2. But once you have all those parts stuck in the paste in about the
right place the Olsen method will cause the parts to orient themselves
right (move) and it does all 100 of them at the same time! Then Cash
told me and I have not done it, but he says then do the back side the
same way! It seems that the pre-heat of 200 F does not soften the solder
on the front side, and when you start final heat on the back side it
takes so much time to heat the front from the back, it never happens.

3. I think I will try it.

73 Karl K5DI

Lee Boulineau wrote:
> There are some very simple key ideas on the web,
> including using hacksaw blades, paper clips, and other
> sundry items. Maybe you can fashion something workable
> from some scrap metal.
>
> GL es 73 de N4MVL Lee
>
>
> --- "Andrew O. Ojwang" <ojwanga2@...> wrote:
>
>
>> Hello all,
>>
>> I just noted the concern of several people regarding
>> SMD/SMT soldering.
>>
>> I have done SMD/SMT work before successfully the
>> manual way, all
>> I need to make the work easier is another soldering
>> iron with a
>> suitable ground , a fine solder tip, and table-top

>> magnifying glass.
>> And of-course plenty of rest, exercise, and good
>> food.
>>
>> The CW issue has always been that the key I have is
>> bad, given to me
>> from the ARSK in bad taste as well, and have to
>> purchase my own
>> keyer, brass key, or bug.
>>
>> The equipment was always loaned from ARSK to me in
>> bad taste, so must
>> purchase, build my own equipment.
>>
>> 73,
>> 5Z4FT/KI4LTH :-(
>>
>>
>>
>>
>>
>>
>
>
>
> _____
> Fussy? Opinionated? Impossible to please? Perfect. Join Yahoo!'s user panel and lay it on us. http://surveylink.yahoo.com/gmrs/yahoo_panel_invite.asp?a=7
>
>
>
>
> Yahoo! Groups Links
>
>
>
>
>
>
>

1234. Re: SMD/SMT concern

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-12 11:42:03 UTC
From: kc7fys
Topic: 1231 Message: 1234

I second that emotion: I, for one, was worried about my lack of expensive equipment to do the kind of kung-fu soldering the fellas were describing. I plan to attack with a fine tip, dorky magnifying glasses, and a big bowl of bran flakes beforehand for stamina. I just got my Rock Mite in the mail today, and if the PCB is 40% as tiny as the AT3B, I think I'll make it. (audience laughs)
Jonathan 7J1AWL/KC7FYS

> I have done SMD/SMT work before successfully the manual way, all
> I need to make the work easier is another soldering iron with a
> suitable ground , a fine solder tip, and table-top magnifying glass.
> And of-course plenty of rest, exercise, and good food.

1235. Re: SMD/SMT concern

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-13 16:49:16 UTC
From: Andrew O. Ojwang
Topic: 1231 Message: 1235

Do not put the barn flakes in the oven, though, wife will decide you
are not the one.

73,
5Z4FT/KI4LTH :-\

1236. Father's Day RFTB

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-16 20:54:26 UTC
From: Larry Makoski
Topic: 1236 Message: 1236

Are your darling wife and dear kids having trouble deciding what to give you for Father's Day? Tell them that you'd like a 2 hour block of "quiet time" on Sunday night so that you can enjoy the June edition of "Run For The Bacon"!

This Sunday evening the Flying Pigs Amateur Radio Club International will be holding its monthly Run For The Bacon. This is a friendly, two hour QRP CW Sprint, which is open to ALL radio amateurs, will last from 9:00 - 11:00PM EDT (0100-0300 UTC Monday).

You may work stations once per band on 160, 80, 40, 20, 15 or 10 Meters. Suggested starting frequencies are 1.812, 3.562, 7.044, 14.062, 21.062, and 28.062 MHz.

The exchange is RST, S/P/C (State, Province, Country) and Flying Pigs membership number. If you're not a member of the Flying Pigs, and would like to be; then please click on the "membership" hyperlink on .http://www.gentzow.com/fpqrp/ Otherwise, non-members can just use their output power figure.

You can report your score via the Autolog page which can be found at :
http://gentzow.com/fpqrp/autolog.asp
or you can mail your logs to the address given on the Autolog page. The deadline for logs is June 24th at 2400 UTC.

Hope to catch you on the air Sunday evening!

72 es "oo"
Larry W2LJ FP#612

--
73 de Larry W2LJ
QRP - When you care to send the very least!

http://www.w2lj.qrpradio.com
http://w2lj.blogspot.com/

1237. Run for the Bacon, 6/17/2007, 6:00 pm

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-18 00:41:54 UTC
From: AT_Sprint@yahoogroups.com
Topic: 1237 Message: 1237

Reminder from: AT_Sprint Yahoo! Group
http://groups.yahoo.com/group/AT_Sprint/cal

Run for the Bacon
Sunday June 17, 2007
6:00 pm - 8:00 pm
(This event repeats every month on the third Sunday.)
Location: Your shack or anywhere

Notes:
This Sunday evening, the Flying Pigs Amateur Radio Club International will be holding its monthly Run For The Bacon. This is a friendly, two hour QRP CW Sprint, which is open to ALL radio amateurs, will last from 9:00 - 11:00PM EDT (0200-0400 UTC Monday).

You may work stations once per band on 160, 80, 40, 20, 15 or 10 Meters. Suggested starting frequencies are 1.812, 3.562, 7.044, 14.062, 21.062, and 28.062 MHz.

The exchange is RST, S/P/C (State, Province, Country) and Flying Pigs membership number. If you're not a member of the Flying Pigs, and would like to be; then please cli

All Rights Reserved
Copyright ? 2007
Yahoo! Inc.
http://www.yahoo.com

Privacy Policy:
http://privacy.yahoo.com/privacy/us

Terms of Service:
http://docs.yahoo.com/info/terms/

1238. Re: ATS 3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-19 03:16:56 UTC
From: Tim
Topic: 1037 Message: 1238

Hi Folks,

I'm a new ham and new to this list. The ATS-3 caught my eye I'm interested in spite of never having done any surface mount work. My newbie question is, will Steve post to this list when the -3b is ready for shipping, or do I need to keep checking his web site?

I hope it's ready to go before I chicken out!

Tim - KX3H

--- In AT_Sprint@yahoogroups.com, "w4mjt" <w4mjt@...> wrote:
>
> When will we hear from Steve concerning the new rig ? I am getting
> itchy !!
>

1239. Re: ATS 3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-19 10:44:54 UTC
From: Bruce Beford
Topic: 1037 Message: 1239

--- In AT_Sprint@yahoogroups.com, "Tim" <bipetype@...> wrote:
>
> Hi Folks,
>
> I'm a new ham and new to this list. The ATS-3 caught my eye I'm
> interested in spite of never having done any surface mount work.
My
> newbie question is, will Steve post to this list when
> the -3b is ready for shipping, or do I need to keep checking his
web
> site?
>
> I hope it's ready to go before I chicken out!
>
> Tim - KX3H
>

You can be sure an announcement will be made here. Steve often lets us know when he's getting close- i.e. boards on order, waiting for backordered parts, etc. That said, It's always a good idea to watch his site for other tidbits as well.

My guess would be late next month, or sometime in August. (I love to be proved wrong by things happening sooner, though.....)

73,
Bruce N1RX

1240. Re: [AT_Sprint] Re: ATS 3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-19 15:30:34 UTC
From: Steven Weber
Topic: 1037 Message: 1240

>My guess would be late next month, or sometime in August. (I love to
>be proved wrong by things happening sooner, though.....)

Actually, probably more like September - just to give myself some wiggle room. I'm still trying to catch up with back logged work which piled up while I was gone hiking for some seven weeks or so.

But I did find time to revist my -B board layout and found I could fit the 28 pin version of the MSP430 on there. And a little 0.2" SMT LED 7 seg display on the top of the board. I did have to resort to using some 0604 sized resistors though. These are used for the current limiting of the LED segments and port pull ups, as I had to remove the resistor pack to make room for the 28 pin MSP.

I think it will be worth having the display for freq readout, even though it reads out one digit at a time. Plus, I'll be using the version of the chip with 10 bit A/D, so will be able to read battery voltage too.

I will also use the 8K memory version of the chip, as some of that will be needed for the display routines. That will leave enough memory available for those who want to add even more features. Finally, this chip has built in hardware UART, but the pins it comes out on are used to drive the display. Not really a problem, just means two segments will flash if it is used for something. (Visual indication it's talking)

It maybe possible to connect the audio output to the A/D input used for battery voltage monitoring to decode digital signals and use the UART for communications to a PDA or pocket PC. However, this is a bit beyond my meger programming abilities, so something like this will have to be done by one of you more knowlegable programmers :-)

I plan to order a few prototype boards of this new version of the rig soon, along with starting to collect parts. Then I can start working on the new manual, which is one of the more time consuming parts of the job.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

1241. Re: ATS 3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-19 16:14:54 UTC
From: Bruce Beford
Topic: 1037 Message: 1241

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:

> Actually, probably more like September - just to give myself some
wiggle
> room.
> But I did find time to revist my -B board layout and found I could
fit the
> 28 pin version of the MSP430 on there. And a little 0.2" SMT LED 7 seg
> display on the top of the board. I did have to resort to using some
0604
> sized resistors though. These are used for the current limiting of
the LED
> segments and port pull ups, as I had to remove the resistor pack to
make
> room for the 28 pin MSP.
<snip>

Very cool, Steve! Thanks for update. Sounds like it will be well worth
waiting for.
73,
Bruce N1RX

1242. Re: [AT_Sprint] Re: ATS 3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-19 16:29:53 UTC
From: Lee Boulineau
Topic: 1037 Message: 1242

I'm saving my pennies - now to decide if I want to
solder / air pencil / oven / or skillet it - do you
want your rig baked or fried?!?

Lee N4MVL

Park yourself in front of a world of choices in alternative vehicles. Visit the Yahoo! Auto Green Center.
http://autos.yahoo.com/green_center/

1243. Re: [AT_Sprint] Re: ATS 3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-19 18:41:56 UTC
From: Kurt Savegnago
Topic: 1037 Message: 1243

> Actually, probably more like September - just to
> give myself some wiggle
> room. I'm still trying to catch up with back logged
> work which piled up
> while I was gone hiking for some seven weeks or so.

That's fine. Just make sure you get enough to meet
the
demand and not sellout too soon! :-)

Kurt Savegnago
KC9LDH

Slackware user since 1994

1244. ATS 3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-20 19:56:47 UTC
From: rushforthje
Topic: 1037 Message: 1244

Hi

Having worked DM2LB who was using an ATS 3 rig (excellent signal quality)I have been following the mail and intend to purchase an ATS 3b when it comes out (save one for me!). Sounds like it will be an autumn/winter project! First of all I will need to get in some practice on SMD soldering as I have not tried it before. I will also need to find the appropriate optical aid to enhance my fading vision - any ideas / recommendations?
In the mean time I thought I might try to learn about the MSP430 as I haven't had any experience of using microprocessors / PICs etc to control radio equipment.

Is there a good on-line tutorial on using / programming the MSP430? Is there a computer simulation for this device?

Jim G3ZPD

1245. Re: ATS 3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-20 20:13:12 UTC
From: alphaindia4oscartango
Topic: 1037 Message: 1245

and there is a lot of pent-up demand --- In
AT_Sprint@yahoogroups.com, "rushforthje" <james.rushforth@...> wrote:
>
> Hi
>
> Having worked DM2LB who was using an ATS 3 rig (excellent signal
> quality)I have been following the mail and intend to purchase an
ATS 3b
> when it comes out (save one for me!). Sounds like it will be an
> autumn/winter project! First of all I will need to get in some
practice
> on SMD soldering as I have not tried it before. I will also need
to
> find the appropriate optical aid to enhance my fading vision - any
> ideas / recommendations?
> In the mean time I thought I might try to learn about the MSP430
as I
> haven't had any experience of using microprocessors / PICs etc to
> control radio equipment.
>
> Is there a good on-line tutorial on using / programming the
MSP430? Is
> there a computer simulation for this device?
>
> Jim G3ZPD
>

1246. Re: [AT_Sprint] ATS 3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-20 22:00:56 UTC
From: Gil Stacy
Topic: 1037 Message: 1246
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

1247. QRP Summer Foxhunts

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-20 23:15:51 UTC
From: Larry Makoski
Topic: 1247 Message: 1247

The 2007 Summer 20 Meter Foxhunt Season is fast approaching!

And we are in need of QRPers to volunteer to for Foz duty!

This summer, the hunts will run on Thursday evenings beginning on July 5th and will run until September 9th. This will provide us with 10 weeks of Summer QRP Foxhunt fun and excitement. There will be, as usual, two hunts per Thursday evening over the ten week period. A bare minimum of 10 volunteers is needed, however, the more the merrier; and we willl consider all who offer to volunteer. Please consider volunteering ESPECIALLY if you've never tried before! You are guaranteed to have the time of your life!

To fill out an application and for all the particulars, please visit: http://www.qrpfoxhunt.org/

Tally Ho! Let the hunts begin!

QRP Foxhunt Committee

1248. Re: ATS 3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-21 04:43:00 UTC
From: Joey Haddock
Topic: 1037 Message: 1248

--- In AT_Sprint@yahoogroups.com, "rushforthje" <james.rushforth@...>
wrote:
>
> Hi
>
> Having worked DM2LB who was using an ATS 3 rig ...
<snip>
> In the mean time I thought I might try to learn about the MSP430 as I
> haven't had any experience of using microprocessors / PICs etc to
> control radio equipment.
>
> Is there a good on-line tutorial on using / programming the MSP430?
Is
> there a computer simulation for this device?
>
> Jim G3ZPD
>

Jim,

Take a look at the eZ430-F2013:

www.ti.com/ez430

It is a very inexpensive tool that plugs into a PC USB port and comes
with CD with documentation and a C compiler. There is also a Yahoo
group where you can follow the adventures of other people. I have had
some fun with this and you can do a lot with it. You may also check
out the web page for their design contest:

http://www.designmsp430.com/

some interesting applications.

Have a great day,

Joey
ki4eo

1249. Re: ATS 3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-21 05:28:20 UTC
From: Tim Keene
Topic: 1037 Message: 1249

If you like "cheap but works" I went to Harbor Frieght and bought a visor for $5. They worked great for me.
Tim - K5DEZ

--- In AT_Sprint@yahoogroups.com, "rushforthje" <james.rushforth@...> wrote:
>
> Hi
>
> Having worked DM2LB who was using an ATS 3 rig (excellent signal
> quality)I have been following the mail and intend to purchase an ATS 3b
> when it comes out (save one for me!). Sounds like it will be an
> autumn/winter project! First of all I will need to get in some practice
> on SMD soldering as I have not tried it before. I will also need to
> find the appropriate optical aid to enhance my fading vision - any
> ideas / recommendations?
> In the mean time I thought I might try to learn about the MSP430 as I
> haven't had any experience of using microprocessors / PICs etc to
> control radio equipment.
>
> Is there a good on-line tutorial on using / programming the MSP430? Is
> there a computer simulation for this device?
>
> Jim G3ZPD
>

1250. Re: [AT_Sprint] ATS 3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-21 18:30:29 UTC
From: Lutz Bergner
Topic: 1037 Message: 1250

Hi Jim,

Great to have you here. I do remember our nice QSO in April. I use "headmounted" magnifying glasses which are availlable at ebay. (e.g. Item number: 110134462381)because my eyesight is fading too probably due to daily computerwork.

72s

Lutz
DM2LB, ex DL2HRP

Am Mittwoch, den 20.06.2007, 19:56 +0000 schrieb rushforthje:
> Hi
>
> Having worked DM2LB who was using an ATS 3 rig (excellent signal
> quality)I have been following the mail and intend to purchase an ATS
> 3b
> when it comes out (save one for me!). Sounds like it will be an
> autumn/winter project! First of all I will need to get in some

1251. Re: ATS 3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-21 22:50:20 UTC
From: radio_kx0r
Topic: 1037 Message: 1251

For close optical work with middle-aged eyes, the best "bang for the buck" is a pair of strong reading glasses, available at many stores like Walgreen's, etc. These actually deliver better images than the various visors, and they're much more comfortable. The cost is low. Try before you buy. I keep a couple of different strengths at my bench.

For inspection of tiny SMT joints, just use a hand magnifier of 4X to 10X, or perhaps a microscope, if you want to go first class.

Some digital cameras can be used in macro mode as microscopes. The camera is connected to the computer, and the computer monitor is used to view the enlarged image. A stand or tripod would be required. Otherwise just take macro closeups with the camera, and look at the images with your computer monitor.

Years ago I was riding my bike and found a pair of junk binoculars in the street. This was a gift from on high. The two 35mm diameter objective lenses became the best hand magnifiers I've ever seen. I use them almost every day. With a wider field of view and better correction than most low-cost magnifiers, they're very pleasant to use for inspection. Only problem is they're not "hands free".

Tool suppliers, like Techni-Tool www.techni-tool.com and Stanley Supply www.stanleysupplyservices.com have a selection of magnifiers and other tools for assembly and inspection. I don't like the big single-lens magnifiers at all, but some people seem to. It's a personal choice. Try before you buy.

A bright light is also necessary. This is personal, but don't skimp. I use 160 watts of fluorescent lamps right over my bench, just above head level. This is two 2 X 40 watt shoplights end-to-end. Good quality triphosphor lamps reduce fatigue and improve color perception compared to the crummy cool white tubes, which deliver poor color balance. I also use a reflector spot lamp for close work or special situations.

Even people with good eyes need a pair of strong reading glasses for enjoyable close work. I'd have never got into deadbug homebrew without my first pair - you absolutely need close stereo vision to do work like that.

Get good tools and enjoy the hobby - more true the older you get.

72/73 KX0R

>
> Hi Jim,
>
> Great to have you here. I do remember our nice QSO in April. I use
> "headmounted" magnifying glasses which are availlable at ebay. (e.g.
> Item number: 110134462381)because my eyesight is fading too
probably due
> to daily computerwork.
>
> 72s
>
> Lutz
> DM2LB, ex DL2HRP
>
> Am Mittwoch, den 20.06.2007, 19:56 +0000 schrieb rushforthje:
> > Hi
> >
> > Having worked DM2LB who was using an ATS 3 rig (excellent signal
> > quality)I have been following the mail and intend to purchase an
ATS
> > 3b
> > when it comes out (save one for me!). Sounds like it will be an
> > autumn/winter project! First of all I will need to get in some
>

1252. Re: [AT_Sprint] Re: ATS 3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-21 23:08:51 UTC
From: Kurt Savegnago
Topic: 1037 Message: 1252

Another thing you can do is put the board on a
scanner.
On my Linux box I get incredible magnification with
the high resolution images. Great for inspection..

Kurt
KC9LDH

--- radio_kx0r <careyfuller@...> wrote:

> For close optical work with middle-aged eyes, the
> best "bang for the
> buck" is a pair of strong reading glasses, available
> at many stores
> like Walgreen's, etc. These actually deliver better
> images than the
> various visors, and they're much more comfortable.
> The cost is low.
> Try before you buy. I keep a couple of different
> strengths at my
> bench.
>
> For inspection of tiny SMT joints, just use a hand
> magnifier of 4X to
> 10X, or perhaps a microscope, if you want to go
> first class.
>
> Some digital cameras can be used in macro mode as
> microscopes. The
> camera is connected to the computer, and the
> computer monitor is used
> to view the enlarged image. A stand or tripod would
> be required.
> Otherwise just take macro closeups with the camera,
> and look at the
> images with your computer monitor.
>
> Years ago I was riding my bike and found a pair of
> junk binoculars in
> the street. This was a gift from on high. The two
> 35mm diameter
> objective lenses became the best hand magnifiers
> I've ever seen. I
> use them almost every day. With a wider field of
> view and better
> correction than most low-cost magnifiers, they're

> very pleasant to
> use for inspection. Only problem is they're not
> "hands free".
>
> Tool suppliers, like Techni-Tool
> www.techni-tool.com and Stanley
> Supply www.stanleysupplyservices.com have a
> selection of magnifiers
> and other tools for assembly and inspection. I
> don't like the big
> single-lens magnifiers at all, but some people seem
> to. It's a
> personal choice. Try before you buy.
>
> A bright light is also necessary. This is personal,
> but don't
> skimp. I use 160 watts of fluorescent lamps right
> over my bench,
> just above head level. This is two 2 X 40 watt
> shoplights end-to-
> end. Good quality triphosphor lamps reduce fatigue
> and improve color
> perception compared to the crummy cool white tubes,
> which deliver
> poor color balance. I also use a reflector spot
> lamp for close work
> or special situations.
>
> Even people with good eyes need a pair of strong
> reading glasses for
> enjoyable close work. I'd have never got into
> deadbug homebrew
> without my first pair - you absolutely need close
> stereo vision to do
> work like that.
>
> Get good tools and enjoy the hobby - more true the
> older you get.
>
> 72/73 KX0R
>
>
> >
> > Hi Jim,
> >
> > Great to have you here. I do remember our nice QSO
> in April. I use
> > "headmounted" magnifying glasses which are
> availlable at ebay. (e.g.
> > Item number: 110134462381)because my eyesight is

> fading too
> probably due
> > to daily computerwork.
> >
> > 72s
> >
> > Lutz
> > DM2LB, ex DL2HRP
> >
> > Am Mittwoch, den 20.06.2007, 19:56 +0000 schrieb
> rushforthje:
> > > Hi
> > >
> > > Having worked DM2LB who was using an ATS 3 rig
> (excellent signal
> > > quality)I have been following the mail and
> intend to purchase an
> ATS
> > > 3b
> > > when it comes out (save one for me!). Sounds
> like it will be an
> > > autumn/winter project! First of all I will need
> to get in some
> >
>
>
>
>
>
> Yahoo! Groups Links
>
>
>
>
>

Slackware user since 1994

1253. DX with AT Sprint

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-24 16:24:25 UTC
From: Andrew O. Ojwang
Topic: 1253 Message: 1253

Hello,

Can anybody volunteer their experience with QRP DX(say over
800miles/1200km) using the AT Sprint.

I would be looking for:

1. Output power you used.
2. Antenna system.
3. Band.

73,
Andrew(5Z4FT/KI4LTH) :-(

1254. Re: [AT_Sprint] DX with AT Sprint

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-24 16:59:31 UTC
From: Lutz Bergner
Topic: 1253 Message: 1254

Hi Andrew,

ATS3 is an excellent DX rig with a very clean an low noise reception.
You can work split easely.
>From Germany I have worked so far with ATS3 + Dipole 12m up among
others :
40m: K(1,2,3,4,8,9),5A,8Q7,BD5,HC8N,A7,4X,TA,3B8,YI
30m: 4S7,5A,K1,K3,YI
20m: K(1,2,3,4,8,9,0) JA,UA0F,JT
You may notice sometimes that you hear DX with less QRM than with other
receivers.

72s

Lutz
DM2LB, ex DL2HRP

Am Sonntag, den 24.06.2007, 19:24 +0300 schrieb Andrew O. Ojwang:
> Hello,
>
> Can anybody volunteer their experience with QRP DX(say over
> 800miles/1200km) using the AT Sprint.
>
> I would be looking for:
>
> 1. Output power you used.
> 2. Antenna system.
> 3. Band.
>
> 73,
> Andrew(5Z4FT/KI4LTH) :-(
>
>
>
>
>
--
iXadmin

---
* Systemadministration
* Netzwerkberatung
* Internetdienstleistungen

Tel.: 034922 66717
Fax.: 034922 66718
mobil: 0175 2631032
VOIP(sipgate): 01801 6666260511
Mail: l.bergner@...

1255. Re: DX with AT Sprint

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-24 17:18:59 UTC
From: Uwe
Topic: 1253 Message: 1255

Hello Andrew,

I got my ATS-3A a few weeks ago. I fired it up on an up&outer erected
by a fishing pole for 20m and worked W (east cost) and JA in the
first hours of using this great little rig...

vy 73 de Uwe, DL4AC

--- In AT_Sprint@yahoogroups.com, Lutz Bergner <l.bergner@...> wrote:
>
> Hi Andrew,
>
> ATS3 is an excellent DX rig with a very clean an low noise
reception.
> You can work split easely.
> >From Germany I have worked so far with ATS3 + Dipole 12m up among
> others :
> 40m: K(1,2,3,4,8,9),5A,8Q7,BD5,HC8N,A7,4X,TA,3B8,YI
> 30m: 4S7,5A,K1,K3,YI
> 20m: K(1,2,3,4,8,9,0) JA,UA0F,JT
> You may notice sometimes that you hear DX with less QRM than with
other
> receivers.
>
> 72s
>
> Lutz
> DM2LB, ex DL2HRP
>
> Am Sonntag, den 24.06.2007, 19:24 +0300 schrieb Andrew O. Ojwang:
> > Hello,
> >
> > Can anybody volunteer their experience with QRP DX(say over
> > 800miles/1200km) using the AT Sprint.
> >
> > I would be looking for:
> >
> > 1. Output power you used.
> > 2. Antenna system.
> > 3. Band.
> >
> > 73,
> > Andrew(5Z4FT/KI4LTH) :-(
> >
> >
> >

> >
> >
> --
> iXadmin
>
> ---------------------------
> * Systemadministration
> * Netzwerkberatung
> * Internetdienstleistungen
> ---------------------------
>
> Tel.: 034922 66717
> Fax.: 034922 66718
> mobil: 0175 2631032
> VOIP(sipgate): 01801 6666260511
> Mail: l.bergner@...
>

1256. Preparing for my ATS... could you look at my Tenna Dipper?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-25 12:09:41 UTC
From: kc7fys
Topic: 1256 Message: 1256

Howdy,
YouTube elmering is one way I can show fellow hams how I'm doing stuff
when I'm trying to iron out the kinks and learn.
Feel free to comment on YouTube and let me know if I'm using my TD right.
Thanks for the brief intrusion with only tangentially related ATS
related content.
http://www.youtube.com/watch?v=WmA9ahj2VXk
VY73,
Jonathan KC7FYS/7J1AWL

1257. QRP Work(from DX with AT Sprint)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-25 14:37:27 UTC
From: Andrew O. Ojwang
Topic: 1257 Message: 1257

Rob,

Yes I monitor a couple of other QRP lists.

If the responses to my post's are conclusive I generally do not reply.

I also never close the posts of some-one else.

You will only appreciate QRP if you can build your own equipment to use.

There is enormous satisfaction of seeing your own home-build
equipment working as it should.

With QRP home-brew work you will find many times things do not work,
and you will spend around these.

On the current market there are the following popular QRP kit radios.

1. Elecraft Series.
2. Smallwonder Labs series.
3. MFJ QRP series.
4. Wilderness Sierra.
5. Tramp 8 by the DL QRP project.
6. Those offered by Hendricks QRP kits.
7. The Pixie, and Tixie are also popular.
8. The Vectronics series.
9. The AT Sprint series.
10. The Softrock TX/RX series.
11. The Somerset range by Walford Electronics(UK)
11. There are several other QRP radios available commercially, the
best bet is to check the links on one of the popular QRP club sites.
12. There are many circuits to choose from on personal QRP sites
through-out the world.

Be aware that many personal QRP schematics can only be copied, and
made once, but that does not prevent you from developing the circuit
further, at your own cost, which means you will have to publish your
findings to stay legal.

I suggest if you really want to enjoy QRP start by building a
conventional direct conversion receiver, then build a simple
super-het to gain experience, then build a single-band QRP
transceiver, and move up to a multi-band transceiver, and a more
complex antenna system. You will also need to budget for accessories,
or build your own.

Budget is not the only constraint for QRP work, an important factor
for QRP work is you enjoy learning new things in the art of Radio

Communications. If that is so QRP is for you.

If you just want to operate QRP get the Yaesu FT-817, that also works well.

The ATS is good, but I assure you the SMD/SMT work will eat-up your
tolerance, patience, and eye-sight.
If you do not enjoy the build, then you may be disappointed by operating it.

Thanks for the replies to the DX with AT Sprint post.

73,
Andrew(5Z4FT/KI4LTH) :-\

At 16:00 6/25/2007, you wrote:

>Andrew,
>
>I've seen your email pop up on the RockMite and ATS
>Yahoo groups. I too am interested in getting into QRP
>(mostly because of budget) and would be interested in
>getting copies of your answers. I see some posted, but
>some responders will reply directly to you. I also
>don't know all of the groups you crossposted on. I
>also would be interested in hearing your thoughts on
>the different rigs out there. ATS seems to have the
>most bells and whistles, but that would be a very
>challenging kit build for me.
>
>Thanks for asking the question that I need answers to
>as well.
>
>Rob
>N9VDP

1258. Soldering iron tips: can it be too fine?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-28 01:53:40 UTC
From: kc7fys
Topic: 1258 Message: 1258

I'm using a 20W soldering iron with a power attenuator that brings down the heat according to my needs. Anyway, I replaced the tip with the finest one I could find. The point is rather slender and pointy--and I find that especially when soldering SMCs (I assembled the QBSA last night in a marathon session that wore out my eyes) the tip isn't hot, but back about 3.5mm the iron is plenty hot. This creates a situation where I can't get the heat precisely in that spot I need it. Especially when mounting U6, I ended up with a couple touchy solder blob bridges that were hard to resolve. I wasn't having luck with solder wick (I used coax braid), as it seemed too cumbersome. I ended up in there with my solder sucker, which has about a 2.5mm diameter hole in the tip--not quite precise enough for this. Anyway... knock on wood... things went well.
My question is--are folks using a conical soldering iron tip, or is there another shape that's ideal for soldering these tiny components?
Jonathan

1259. Cash Olsen Method (need URL, etc)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-28 01:57:59 UTC
From: kc7fys
Topic: 1259 Message: 1259

Could somebody point me to the instructions YOU are referring to with
all the details on this soldering method?
Thanks,
Jonathan

1260. RE: [AT_Sprint] Cash Olsen Method (need URL, etc)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-28 02:12:53 UTC
From: Rob May
Topic: 1259 Message: 1260

I like using a small conical tip, or if you can find one a tiny chisel tip (there is one on the Pace soldering station at work). I like to keep the temperature of the tip high and work fast. Sometimes a small tip requires holding the iron on the piece longer than I like. I've built two ATS-3A's, one ATS-3, the QSBA, FCC-2 and Norcal SMT Dummy Load, all hand soldered. It's my preferred method. That said, here are some links to the solder paste/toaster oven method:

http://www.hpsdr.com/Public/Projects/SMT/SMT.html
http://www.zianet.com/erg/SMT_Soldering.html

Rob
NV5E

>From: "kc7fys" <kc7fys@...>
>Reply-To: AT_Sprint@yahoogroups.com
>To: AT_Sprint@yahoogroups.com
>Subject: [AT_Sprint] Cash Olsen Method (need URL, etc)
>Date: Thu, 28 Jun 2007 01:57:59 -0000
>
>Could somebody point me to the instructions YOU are referring to with
>all the details on this soldering method?
>Thanks,
>Jonathan
>

Who's that on the Red Carpet? Play & win glamorous prizes.
http://club.live.com/red_carpet_reveal.aspx?icid=REDCARPET_hotmailtextlink3

1261. Re: [AT_Sprint] Soldering iron tips: can it be too fine?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-28 05:05:53 UTC
From: WE0H
Topic: 1258 Message: 1261

You would need a higher wattage heater element to run those needle point tips. Try a 50w minimum heater. Metcal makes some nice power supply/irons but they are 300 bucks used and over $500 new for a Metcal 500 station.

So to work with a small wattage heater, stick with tips that are small at the tip but not so long that the heater can't keep up with the demand of the soldering task. 700 or 750 is a good temperature, nothing more needed. If you have liquid flux, use it as it will help the solder flow much better than just the solder's flux core can alone. Use lots of flux and wash the board later in whatever you need to remove all the flux. Water based flux/solder is much easier to clean up later rather than rosin. You can even run your boards through the dishwasher and they will come out sparkling clean. Really. If you use water soluble flux/solder, do NOT leave it on the boards over night ever. It is corrosive. Same goes when it comes time for cleaning, wash the crap out of the boards to ensure 100% of the flux is washed out from under the surface mount components. If you use rosin, use tons of alcohol to wash the board until there is not a trace of sticky feeling to anything. Iso-Heat gas line anti freeze is 100% alcohol and washes boards excellent. Blow dry all boards with the air hose, there will something to blow dry on either wash method even if it looks dry from sitting around. Surface mount components are like a wick holding liquid under them very well.

Soak the coax braid in rosin to make it work very well for wicking solder. The rolls of de-solder wick are expensive so you have a great idea using the coax braid.

Mike
WE0H

kc7fys wrote:
>
>
> I'm using a 20W soldering iron with a power attenuator that brings
> down the heat according to my needs. Anyway, I replaced the tip with
> the finest one I could find. The point is rather slender and
> pointy--and I find that especially when soldering SMCs (I assembled
> the QBSA last night in a marathon session that wore out my eyes) the
> tip isn't hot, but back about 3.5mm the iron is plenty hot. This
> creates a situation where I can't get the heat precisely in that spot
> I need it. Especially when mounting U6, I ended up with a couple
> touchy solder blob bridges that were hard to resolve. I wasn't having
> luck with solder wick (I used coax braid), as it seemed too
> cumbersome. I ended up in there with my solder sucker, which has about
> a 2.5mm diameter hole in the tip--not quite precise enough for this.

> Anyway... knock on wood... things went well.
> My question is--are folks using a conical soldering iron tip, or is
> there another shape that's ideal for soldering these tiny components?
> Jonathan

1262. Area "Appliance Operator" graduates up to "Appliance Assembler/Operator"

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-28 06:35:29 UTC
From: kc7fys
Topic: 1262 Message: 1262

My QBSA has passed the initial smoke test. 13.8V applied produced 5V on pin 1 of U3, etc. It's a fun kit, with a very well-written manual, sent out quite quickly. (Thanks, Steve!) Now to find the appropriate enclosure.
73,
Jonathan KC7FYS

1263. Re: [AT_Sprint] Cash Olsen Method (need URL, etc)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-28 12:52:44 UTC
From: Karl Larsen
Topic: 1259 Message: 1263

Rob May wrote:
> I like using a small conical tip, or if you can find one a tiny chisel tip
> (there is one on the Pace soldering station at work). I like to keep the
> temperature of the tip high and work fast. Sometimes a small tip requires
> holding the iron on the piece longer than I like. I've built two ATS-3A's,
> one ATS-3, the QSBA, FCC-2 and Norcal SMT Dummy Load, all hand soldered.
> It's my preferred method. That said, here are some links to the solder
> paste/toaster oven method:
>
> http://www.hpsdr.com/Public/Projects/SMT/SMT.html
> http://www.zianet.com/erg/SMT_Soldering.html
>
> Rob
> NV5E
>
>
>
>> From: "kc7fys" <kc7fys@...>
>> Reply-To: AT_Sprint@yahoogroups.com
>> To: AT_Sprint@yahoogroups.com
>> Subject: [AT_Sprint] Cash Olsen Method (need URL, etc)
>> Date: Thu, 28 Jun 2007 01:57:59 -0000
>>
>> Could somebody point me to the instructions YOU are referring to with
>> all the details on this soldering method?
>> Thanks,
>> Jonathan
>>
>>
>
> ____
> Who's that on the Red Carpet? Play & win glamorous prizes.
> http://club.live.com/red_carpet_reveal.aspx?icid=REDCARPET_hotmailtextlink3
>
>
>
>
> Yahoo! Groups Links
>
>
>
>
>
>
> I will use the Cash Olsen method on the ATS3b and I direct you to Cash's web page above.
You will need to order the $5.00 syringe of solder in a paste and the heaters and your set.

All cheap and effective.

Karl

1264. QBSA Frequency Counter

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-30 02:42:40 UTC
From: kc7fys
Topic: 1264 Message: 1264

My QBSA functions well reading f/r power. Still futzing with the FX counter. I connected one wire to the freq counter in, another to G, and looped a test lead half a dozen times around my main QRO rig feedline (dialed back to about 6W) and connected each end to the two freq counter leads on the QBSA. I stll get a 000.0 reading. This is my first experience using a frequency counter; am I on the right track?
Thanks,
Jonathan

1265. Re: [AT_Sprint] QBSA Frequency Counter

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-30 18:05:26 UTC
From: Steven Weber
Topic: 1264 Message: 1265

>and looped a test lead half a dozen times around my main QRO rig
>feedline (dialed back to about 6W) and connected each end to the two

Apparently, you have a well shielded dummy load. If you have a "T"
connector, put that in line and put a short wire into the open end of the
"T", then put your lead from the counter near that.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

1266. Re: [AT_Sprint] QBSA Frequency Counter

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-06-30 19:31:32 UTC
From: Steven Weber
Topic: 1264 Message: 1266

Oh, an even easier way to do it is simply pass the transmitter through the QSBA board and when more than a couple of watts passes through it, the counter should pick up enough signal to work, even with out any wire connected to the counter input.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

1267. What connector is generally used for frequency counter input?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-01 14:00:57 UTC
From: Jonathan
Topic: 1267 Message: 1267
Attachments: 1 described; binary payloads are missing from this source WARC

The frequency counter jumped to life! I was able to calibrate it.
This is really a nice little device. Is a BNC generally the jack used for a frequency counter?
Thanks for the tips,
Jonathan

1268. ATS-3B progress report

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-02 21:40:59 UTC
From: Steven Weber
Topic: 1264 Message: 1268

Gang,

The prototype boards for the -3B arrived today and wasted no time starting to populate one. It's pretty much finished and no major problems so far, but there are a few things which need to be fixed (like calling out a via when it should have been a pad - via's have solder mask over them while pads don't)

Now I can start on the new software to add in the single digit frequency display. That's right, the 3B has a little 0.2" LED 7 seg display above the Freq up button to read out the frequency. It will also read out the battery voltage, which should be handy.

Now the question is, how should the readout work? Making it show the digits at the same rate as the morse announciation would be the easiest. I may also make it read out when you stop tuning in auto step mode. Make it blink at 1 kHz points? Option to turn it off to conserve batteries?
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

1269. Re: [AT_Sprint] ATS-3B progress report

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-02 21:55:40 UTC
From: Kurt Savegnago
Topic: 1264 Message: 1269

I have a tendency to use high capacity batteries but folks who like to travel light probably would appreciate the option to turn out the display. Make sure you
make enough kits to cover the demand. :-) Once you announce the availability, be ready for a rush to order too.

Kurt Savegnago
KC9LDH

Slackware user since 1994

1270. RE: [AT_Sprint] ATS-3B progress report

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-02 22:00:38 UTC
From: Ken Evans
Topic: 1264 Message: 1270

I like having the digits at the same rate as the annunciation. I assume having it read out when you stop tuning would also cause an annunciation. If so, I would not want that. Nor would I want a readout a 1kHz points if it included an annunciation. Being able to turn it off is very desirable.

Ken Evans

W4DU

From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com] On Behalf Of Steven Weber
Sent: Monday, July 02, 2007 17:41
To: AT_Sprint@yahoogroups.com
Subject: [AT_Sprint] ATS-3B progress report

Gang,

The prototype boards for the -3B arrived today and wasted no time starting to populate one. It's pretty much finished and no major problems so far, but there are a few things which need to be fixed (like calling out a via when it should have been a pad - via's have solder mask over them while pads don't)

Now I can start on the new software to add in the single digit frequency display. That's right, the 3B has a little 0.2" LED 7 seg display above the Freq up button to read out the frequency. It will also read out the battery voltage, which should be handy.

Now the question is, how should the readout work? Making it show the digits at the same rate as the morse announciation would be the easiest. I may also make it read out when you stop tuning in auto step mode. Make it blink at 1 kHz points? Option to turn it off to conserve batteries?
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv. <http://kd1jv.qrpradio.com> qrpradio.com

1271. Re: [AT_Sprint] ATS-3B progress report

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-02 23:18:34 UTC
From: WE0H
Topic: 1264 Message: 1271

Any guesstimate on a price range yet? Any idea what so ever so I can
save up or convince the hell out of the XYL so she can buy it for me...

And yes ability to turn off the LED display, LED displays are power
hungry devices.

Many thanks,
Mike
WE0H

Kurt Savegnago wrote:
>
>
> I have a tendency to use high capacity batteries but
> folks who like to travel light probably would
> appreciate the option to turn out the display. Make
> sure you
> make enough kits to cover the demand. :-) Once you
> announce the availability, be ready for a rush to
> order too.
>
> Kurt Savegnago
> KC9LDH

1272. Re: [AT_Sprint] ATS-3B progress report

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-02 23:50:05 UTC
From: Terry WAØITP
Topic: 1264 Message: 1272

Fb Steve!

The LED is an outstanding idea. 3 out the four possibilites do it for me, blinking isnt necc for me but others may like it.

Another thought might be have the option of outputting the freq to a counter similar to the method on the QBSA. Anyone know of a really small 4 or 5 digit lcd display that could be used with a small enclosure, similar to a Whitmans?

Fine design Steve, can't wait... Thank you for such great innovations.

I love this radio stuff!
72 73
Terry, WAØITP
http://www.wa0dx.org/wa0itp
http://www.wa0dx.org
http://www.4sqrp.com/

----- Original Message -----
From: Steven Weber
To: AT_Sprint@yahoogroups.com
Sent: Monday, July 02, 2007 4:40 PM
Subject: [AT_Sprint] ATS-3B progress report

Gang,

The prototype boards for the -3B arrived today and wasted no time starting to populate one. It's pretty much finished and no major problems so far, but there are a few things which need to be fixed (like calling out a via when it should have been a pad - via's have solder mask over them while pads don't)

Now I can start on the new software to add in the single digit frequency display. That's right, the 3B has a little 0.2" LED 7 seg display above the Freq up button to read out the frequency. It will also read out the battery voltage, which should be handy.

Now the question is, how should the readout work? Making it show the digits at the same rate as the morse announciation would be the easiest. I may also make it read out when you stop tuning in auto step mode. Make it blink at 1 kHz points? Option to turn it off to conserve batteries?
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

No virus found in this incoming message.
Checked by AVG Free Edition.
Version: 7.5.476 / Virus Database: 269.9.14/883 - Release Date: 7/1/2007 12:19 PM

1273. Re: [AT_Sprint] ATS-3B progress report

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-02 23:56:57 UTC
From: Karl Larsen
Topic: 1264 Message: 1273

Steven Weber wrote:
> Gang,
>
> The prototype boards for the -3B arrived today and wasted no time starting
> to populate one. It's pretty much finished and no major problems so far,
> but there are a few things which need to be fixed (like calling out a via
> when it should have been a pad - via's have solder mask over them while
> pads don't)
>
> Now I can start on the new software to add in the single digit frequency
> display. That's right, the 3B has a little 0.2" LED 7 seg display above the
> Freq up button to read out the frequency. It will also read out the battery
> voltage, which should be handy.
>
Hi Steve, it is a 7 segment display so does that mean it can show
7.04500 or does it mean just one number?
> Now the question is, how should the readout work? Making it show the digits
> at the same rate as the morse announciation would be the easiest.
I would like it to display frequency when I press for a frequency
readout in CW. I like that best.

> I may
>

> also make it read out when you stop tuning in auto step mode. Make it blink
> at 1 kHz points?
Nope no use to me.
> Option to turn it off to conserve batteries?
> 72,
>
It will be off most of the time my way. It works when you ask for frequency.

> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com
>
>
>
> Yahoo! Groups Links
>
>
>
>
>
>

1274. Re: [AT_Sprint] ATS-3B progress report

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-03 00:36:37 UTC
From: Michael Harnage
Topic: 1264 Message: 1274

My personal preferences have changed over time and now
I would prefer to not have a visual readout... I would
prefer to not have a display at all, instead provide
an option to add one for those that want it via a
serial output line. I have come to prefer the
simplicity of the rig with audio feedback. Easy access
to a few empty ports would be preferred over digital
display.

That said, I will buy whatever you come up with! :)

-mike/w1mt

--- Steven Weber <kd1jv@...> wrote:

> Now I can start on the new software to add in the
> single digit frequency
> display. That's right, the 3B has a little 0.2" LED
> 7 seg display above the
> Freq up button to read out the frequency. It will
> also read out the battery
> voltage, which should be handy.
>
> Now the question is, how should the readout work?
> Making it show the digits
> at the same rate as the morse announciation would be
> the easiest. I may
> also make it read out when you stop tuning in auto
> step mode. Make it blink
> at 1 kHz points? Option to turn it off to conserve
> batteries?

Sick sense of humor? Visit Yahoo! TV's
Comedy with an Edge to see what's on, when.
http://tv.yahoo.com/collections/222

1275. Re: ATS-3B progress report

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-03 11:08:14 UTC
From: Bruce Beford
Topic: 1264 Message: 1275

Steve- on the LED display-

1. I think having the display readout at the same rate as the Morse annunciation would be good.

2. Having it readout after tuning stop would also be good.

3. Blinking at 1 kHz marks- not needed. That's what the beeps are for.

4. Ability to disable it entirely - priceless.

As a related aside- If these small smt displays work out, I'd like to see you offer a new version of your Digital Dial module using these. Should make a nice small footprint model possible.

Oh yeah... one more thing. Bring the 3b proto to Lobstercon, OK? (please...) Hope to see you later this week.

72,
Bruce N1RX

1276. Re: [AT_Sprint] Re: ATS-3B progress report

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-03 12:55:10 UTC
From: Terry WAØITP
Topic: 1264 Message: 1276

I'll second Bruce's thought on the small smt counter.

I love this radio stuff!
72 73
Terry, WAØITP
http://www.wa0dx.org/wa0itp
http://www.wa0dx.org
http://www.4sqrp.com/

----- Original Message -----
From: Bruce Beford
To: AT_Sprint@yahoogroups.com
Sent: Tuesday, July 03, 2007 6:08 AM
Subject: [AT_Sprint] Re: ATS-3B progress report

Steve- on the LED display-

1. I think having the display readout at the same rate as the Morse annunciation would be good.

2. Having it readout after tuning stop would also be good.

3. Blinking at 1 kHz marks- not needed. That's what the beeps are for.

4. Ability to disable it entirely - priceless.

As a related aside- If these small smt displays work out, I'd like to see you offer a new version of your Digital Dial module using these. Should make a nice small footprint model possible.

Oh yeah... one more thing. Bring the 3b proto to Lobstercon, OK? (please...) Hope to see you later this week.

72,
Bruce N1RX

No virus found in this incoming message.
Checked by AVG Free Edition.
Version: 7.5.476 / Virus Database: 269.9.14/884 - Release Date: 7/2/2007 3:35 PM

1277. RE: [AT_Sprint] Re: ATS-3B progress report

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-03 15:25:47 UTC
From: andrew.macallister@emersonprocess.com
Topic: 1264 Message: 1277

Uh Oh... Now I've got to figure out how to build up a 3b even lighter than my 3a (0.125 lbs) for the Spartan Sprint!

72 de Andy W5ACM

_____

From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com] On Behalf Of Terry WAØITP
Sent: Tuesday, July 03, 2007 7:55 AM
To: AT_Sprint@yahoogroups.com
Subject: Re: [AT_Sprint] Re: ATS-3B progress report

I'll second Bruce's thought on the small smt counter.

I love this radio stuff!
72 73
Terry, WAØITP
http://www.wa0dx.org/wa0itp <http://www.wa0dx.org/wa0itp>
http://www.wa0dx.org <http://www.wa0dx.org>
http://www.4sqrp.com/ <http://www.4sqrp.com/>

----- Original Message -----

From: Bruce Beford <mailto:bruce.beford@...>

To: AT_Sprint@yahoogroups.com <mailto:AT_Sprint@yahoogroups.com>

Sent: Tuesday, July 03, 2007 6:08 AM

Subject: [AT_Sprint] Re: ATS-3B progress report

Steve- on the LED display-

1. I think having the display readout at the same rate as the Morse annunciation would be good.

2. Having it readout after tuning stop would also be good.

3. Blinking at 1 kHz marks- not needed. That's what the beeps are for.

4. Ability to disable it entirely - priceless.

As a related aside- If these small smt displays work out, I'd like to see you offer a new version of your Digital Dial module using these. Should make a nice small footprint model possible.

Oh yeah... one more thing. Bring the 3b proto to Lobstercon, OK?
(please...) Hope to see you later this week.

72,
Bruce N1RX

---

size=2 width="100%" align=center>

No virus found in this incoming message.
Checked by AVG Free Edition.
Version: 7.5.476 / Virus Database: 269.9.14/884 - Release Date: 7/2/2007 3:35 PM

1278. [AT_Sprint] 3a price??? 3b price guess???

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-03 15:48:44 UTC
From: WE0H
Topic: 1264 Message: 1278

How much was the 3a model? No one has answered my question on a rough ass guess on the 3b price so I'd at least have some idea if it is $100, $300 or what price range.

Thanks,
Mike
WE0H

1279. Re: [AT_Sprint] Re: ATS-3B progress report

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-03 15:56:32 UTC
From: Steven Weber
Topic: 1264 Message: 1279

>3. Blinking at 1 kHz marks- not needed. That's what the beeps are for.
>
My version of the firmware only beeps at 1 kHz marks in split mode, I
belive w1mt's version has it beep during normal tuning also.

>4. Ability to disable it entirely - priceless.
>
Yes, I think this will be required.

I've also thought of a few other uses for the display -
1. read out the keyer code speed
2. blink segments when in keyer memory entry mode to show when the letter
and space timeouts occur making keying in messages without mistakes easier.
3. Indicate the number entered while in DFE mode.

I may provide quicker access to some of the memu functions also, like DFE
and tune mode. This would be done in a similer fashion to how the keyer
memories work - click the menu button, then quickly click one of the other
3 buttons.

Now that I've gone to the 8K memory MPS part, there's pleanty of program
space for adding things like that.

>As a related aside- If these small smt displays work out, I'd like to
>see you offer a new version of your Digital Dial module using these.
>Should make a nice small footprint model possible.
>

I've been thinking of that, but these are single digit displays, though
they do come in dual digits. Either way, thier non-mulitplexed, so running
tacks between them all and not resorting to a 4 layer board might be a
problem.

>Oh yeah... one more thing. Bring the 3b proto to Lobstercon, OK?
>(please...) Hope to see you later this week.
>

Don't know if it will be functional yet, but will bring it!

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

1280. Digital Dial possibilities

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-03 16:15:51 UTC
From: Bruce Beford
Topic: 1264 Message: 1280

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
>
> >N1RX: If these small smt displays work out, I'd like to
> >see you offer a new version of your Digital Dial module using these.
> >Should make a nice small footprint model possible.
>
> I've been thinking of that, but these are single digit displays
>

On the proposed Digital Dial, I was speaking of a single-digit readout version. If you counld find a nice (cheap/small) version of the TIL311 (or similar) with built-in hexidecimal decoder, you could even do it with a 8 pin SMT micro, for a super-small overall package.

Cool...
72,
Bruce N1RX

1281. Re: 3a price??? 3b price guess???

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-03 16:22:16 UTC
From: Bruce Beford
Topic: 1264 Message: 1281

--- In AT_Sprint@yahoogroups.com, WE0H <we0h@...> wrote:
>
> How much was the 3a model? No one has answered my question on a rough
> ass guess on the 3b price so I'd at least have some idea if it is
$100,
> $300 or what price range.
>
> Thanks,
> Mike
> WE0H
>

Mike- IIRC, the 3a was $155.00 (+/- $10).
I would expect the 3b to cost a bit more for the 2 added band modules,
and new led readout.

-Bruce N1RX

1282. Re: [AT_Sprint] Re: 3a price??? 3b price guess???

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-03 16:35:27 UTC
From: WE0H
Topic: 1264 Message: 1282

Excellent!!! Thank you Bruce. I was almost gonna give up on the group as
I couldn't get an answer. So my guesstimate would be ~$200 for the new kit.

Mike
WE0H

Bruce Beford wrote:

> Mike- IIRC, the 3a was $155.00 (+/- $10).
> I would expect the 3b to cost a bit more for the 2 added band modules,
> and new led readout.
>
> -Bruce N1RX

1283. Re: [AT_Sprint] 3a price??? 3b price guess???

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-03 16:41:40 UTC
From: Hank Greeb
Topic: 1264 Message: 1283

Mike:

At whatever price, it will be a bargain.

As Bruce, N1RX said, it probably will be a bit more than the 3a, but certainly less pricey that the Elecraft K3. :)

My concern is that I've never built a Surface Mount Kit, so I may bollix up the building job to such a point that it's irreparable. I did successfully bid on a SMK-1 from NorCal, and I'll try building it before I try the ATS-3b.

72 de n8xx Hg

WE0H wrote:

> How much was the 3a model? No one has answered my question on a rough
> ass guess on the 3b price so I'd at least have some idea if it is $100,
> $300 or what price range.
>
> Thanks,
> Mike
> WE0H
>
>

1284. Re: [AT_Sprint] Re: ATS-3B progress report

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-03 16:41:36 UTC
From: Mark Brueggemann
Topic: 1264 Message: 1284

--- Steven Weber <kd1jv@...> wrote:

> >4. Ability to disable it entirely - priceless.
> >
> Yes, I think this will be required.

Sounds like most people so far want the option to turn it off. I'm trying to understand what real benefit it provides for any function. I would rather see a rotary encoder for frequency control before I'd bother with a single digit character echoing what I'm already hearing in my earphone anyway.

> so running tacks between them all and not resorting to a
> 4 layer board might be a problem.

What's wrong with a 4 layer board? Or even 6? Would be nice to route signals between ground layers and provide beefy power and ground planes.

Mark K5LXP
Albuquerque, NM

1285. Re: [AT_Sprint] 3a price??? 3b price guess???

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-03 17:59:42 UTC
From: michael taylor
Topic: 1264 Message: 1285

On 7/3/07, Hank Greeb <n8xx@...> wrote:
>
> My concern is that I've never built a Surface Mount Kit, so I may bollix
> up the building job to such a point that it's irreparable. I did
> successfully bid on a SMK-1 from NorCal, and I'll try building it before
> I try the ATS-3b.

The currently available SMT Dummy Load and Tuner Upper from NorCal QRP club are simple SMT kits to get some first practice with as well. And they are pretty cheap ($7.50 / $10), in case you do manage to mess it up.
<http://www.norcalqrp.org/ncdummyload.htm>
<http://www.norcalqrp.org/nctunerupper.htm>

-Michael, VE3TIX

1286. Re: Surface Mount Kits/Construction

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-03 18:28:24 UTC
From: Hank Greeb
Topic: 1264 Message: 1286

Tnx OM, I'll look into those also. At my age (well over 30, which is the "over the hill" age for my kids), and feeblemindedness (though my IQ has risen since my kids stopped being teenagers), I need all the help I can get. :)

72 de n8xx Hg

michael taylor wrote:

> On 7/3/07, Hank Greeb <n8xx@... <mailto:n8xx%40arrl.org>> wrote:
> >
> > My concern is that I've never built a Surface Mount Kit, so I may bollix
> > up the building job to such a point that it's irreparable. I did
> > successfully bid on a SMK-1 from NorCal, and I'll try building it before
> > I try the ATS-3b.
>
> The currently available SMT Dummy Load and Tuner Upper from NorCal QRP
> club are simple SMT kits to get some first practice with as well. And
> they are pretty cheap ($7.50 / $10), in case you do manage to mess it
> up.
> <http://www.norcalqrp.org/ncdummyload.htm
> <http://www.norcalqrp.org/ncdummyload.htm>>
> <http://www.norcalqrp.org/nctunerupper.htm
> <http://www.norcalqrp.org/nctunerupper.htm>>
>
> -Michael, VE3TIX
>
>
> <>
> <http://us.ard.yahoo.com/SIG=12jo80pfh/M=493064.10729657.11333348.8674578/D=groups/S=1705063108:NC/Y=YAHOO/EXP=1183492784/A=4025291/R=0/SIG=12bsapn24/*http://us.rd.yahoo.com/evt=44092/*http://smallbusiness.yahoo.com/merchant>
>
> <>
> <http://us.ard.yahoo.com/SIG=12jfsnl42/M=493064.10771301.11554070.8674578/D=groups/S=1705063108:NC/Y=YAHOO/EXP=1183492784/A=4699088/R=0/SIG=11pv8cj55/*http://advision.webevents.yahoo.com/yogazone/index.html>
>

1287. Re: [AT_Sprint] ATS-3B progress report

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-03 20:02:15 UTC
From: mstangelo@comcast.net
Topic: 1264 Message: 1287

Steve,

- A 3 digit led display would be nice. Would 3 digits consume too much power? I'd gladly pay for the convenience.

- It would be nice to have different display modes:
1. Completely off to conserve power.
2. Display on when it is polled for the frequency or when it reaches 50 khz points.
3. Complete on when power is available.

In any case, I'm eagerky awaiting the release of the -3B !

73,

Mike N2MS

-------------- Original message --------------
From: Steven Weber <kd1jv@...>

> Gang,
>
> The prototype boards for the -3B arrived today and wasted no time starting
> to populate one. It's pretty much finished and no major problems so far,
> but there are a few things which need to be fixed (like calling out a via
> when it should have been a pad - via's have solder mask over them while
> pads don't)
>
> Now I can start on the new software to add in the single digit frequency
> display. That's right, the 3B has a little 0.2" LED 7 seg display above the
> Freq up button to read out the frequency. It will also read out the battery
> voltage, which should be handy.
>
> Now the question is, how should the readout work? Making it show the digits
> at the same rate as the morse announciation would be the easiest. I may
> also make it read out when you stop tuning in auto step mode. Make it blink
> at 1 kHz points? Option to turn it off to conserve batteries?
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com
>

1288. Re: [AT_Sprint] 3a price??? 3b price guess???

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-03 22:54:25 UTC
From: Steven Weber
Topic: 1264 Message: 1288

>ass guess on the 3b price so I'd at least have some idea if it is $100,
>$300 or what price range.
>
Half way in between, $190.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

1289. Re: ATS-3B progress report

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-04 12:29:46 UTC
From: jerry
Topic: 1264 Message: 1289

re what to do with the blinkn' lights:

if there is still RIT, maybe something to remind me if i forgot to
turn the rit back off...

72
jerry aa1of

1290. Re:3a price??? 3b price guess???

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-04 15:37:24 UTC
From: Andrew O. Ojwang
Topic: 1264 Message: 1290

My guess would be US$160-180 inclusive of DX USPS Airmail shipping,
for custom's acceptance at the DX destination.

Andrew(5Z4FT/KI4LTH)

--
This message has been scanned for viruses and
dangerous content by MailScanner, and is
believed to be clean.

1291. Re:3a price??? 3b price guess???

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-04 17:46:19 UTC
From: Bruce Beford
Topic: 1264 Message: 1291

--- In AT_Sprint@yahoogroups.com, "Andrew O. Ojwang" <ojwanga2@...>
wrote:
>
> My guess would be US$160-180 inclusive of DX USPS Airmail shipping,
> for custom's acceptance at the DX destination.
>
> Andrew(5Z4FT/KI4LTH)
>
>
> --
> This message has been scanned for viruses and
> dangerous content by MailScanner, and is
> believed to be clean.
>

Steve has already stated the '3b price will be $190 USD. I assume that,
as in the past, that will include domestic shipping. DX shipping/
customs fees will be additional.

-Bruce N1RX (getting the car packed to head to Lobstercon....)

1292. Re: [AT_Sprint] Re: ATS-3B progress report

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-04 19:43:25 UTC
From: Steven Weber
Topic: 1264 Message: 1292

>re what to do with the blinkn' lights:
>
>if there is still RIT, maybe something to remind me if i forgot to
>turn the rit back off...

Good idea Jerry. I was going to use the DP on the display as a power on indicator, but instead will use it to show split modes are active.

I now have the frequency and battery voltage display working. I belive I will add the ability to have morse+display, morse only or display only options.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

1293. Re: [AT_Sprint] Re: ATS-3B progress report

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-04 20:14:46 UTC
From: bgriffin
Topic: 1264 Message: 1293

Steve,
do you mean morse decoding or flashing in time to the morse as
a visual indicator? I have been working on a morse decoder with
lcd display as published by ik3oil. Probably not, most of you guys
would never miss a letter would you? :)

Bill, ni5x

>
>
> I now have the frequency and battery voltage display working. I belive I
> will add the ability to have morse+display, morse only or display only
> options.
>

1294. RE: [AT_Sprint] Re: ATS-3B progress report

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-04 20:31:56 UTC
From: Ken Lotts
Topic: 1264 Message: 1294

As far as firmware idea's

A built in high speed very low duty cycle chirper mode for tuning up might be simple to program in and it would offer a handy way to conserve battery while tuning ..vs a 2+ watt dead key.

Ken Lotts
aa7jc

-----Original Message-----
From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com]On Behalf Of Steven Weber
Sent: Wednesday, July 04, 2007 12:43 PM
To: AT_Sprint@yahoogroups.com
Subject: Re: [AT_Sprint] Re: ATS-3B progress report

>re what to do with the blinkn' lights:
>
>if there is still RIT, maybe something to remind me if i forgot to
>turn the rit back off...

Good idea Jerry. I was going to use the DP on the display as a power on indicator, but instead will use it to show split modes are active.

I now have the frequency and battery voltage display working. I belive I will add the ability to have morse+display, morse only or display only options.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

1295. Re: ATS-3B progress report

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-04 21:43:25 UTC
From: Bruce Beford
Topic: 1264 Message: 1295

--- In AT_Sprint@yahoogroups.com, bgriffin <bgriffin@...> wrote:
>
> Steve,
> do you mean morse decoding or flashing in time to the morse as
> a visual indicator? I have been working on a morse decoder with
> lcd display as published by ik3oil. Probably not, most of you guys
> would never miss a letter would you? :)
>
> Bill, ni5x
>
> >
> >
> > I now have the frequency and battery voltage display working. I
belive I
> > will add the ability to have morse+display, morse only or display
only
> > options.
> >
>

Bill- I believe what Steve was refering to was the operating frequency readout. Up to now, the ATS series of radios 'sounded out' the operating frequency in morse through the headphones. Steve is adding the LED to give visual readout of the operating frequency (and now battery voltage). It looks like the user may have the option of Morse readout only, LED readout only, or both together. There are no plans for a CW decoder, or LEDs 'flashing in time' with the received CW signal.

-Bruce N1RX

1296. RE: [AT_Sprint] Re: ATS-3B progress report

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-04 22:08:47 UTC
From: Ken Lotts
Topic: 1264 Message: 1296

Here are some more thoughts on how this could be spliced into the menu.

tapping the DASH paddle toggles the transmitter on in dead key mode.
tapping the DOT paddle toggles the transmitter on in chirper mode (75WPM @ 13% weight).
retapping either paddle (or any button) toggles the transmitter off.

Ken Lotts
aa7jc

-----Original Message-----
From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com]On Behalf Of Ken Lotts
Sent: Wednesday, July 04, 2007 1:32 PM
To: AT_Sprint@yahoogroups.com
Subject: RE: [AT_Sprint] Re: ATS-3B progress report

As far as firmware idea's

A built in high speed very low duty cycle chirper mode for tuning up might be simple to program in and it would offer a handy way to conserve battery while tuning ..vs a 2+ watt dead key.

Ken Lotts
aa7jc

-----Original Message-----
From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com]On Behalf Of Steven Weber
Sent: Wednesday, July 04, 2007 12:43 PM
To: AT_Sprint@yahoogroups.com
Subject: Re: [AT_Sprint] Re: ATS-3B progress report

>re what to do with the blinkn' lights:
>
>if there is still RIT, maybe something to remind me if i forgot to
>turn the rit back off...

Good idea Jerry. I was going to use the DP on the display as a power on indicator, but instead will use it to show split modes are active.

I now have the frequency and battery voltage display working. I belive I will add the ability to have morse+display, morse only or display only options.
72,
Steve, KD1JV
"Melt Solder"

White Mountains of New Hampshire
http://kd1jv.qrpradio.com

1297. It's in the mail

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-04 22:21:08 UTC
From: Karl Larsen
Topic: 1297 Message: 1297

How ever it turns out, I have sent Steve my order for a ATS3B and will await delivery. I have enough solder laden paste to do it, and will try for both sides in two heats. Tomorrow I will chase the Fox on 20 meters with my current ATS3 in a Altoids tin. The key now is a Vibroplex Paddle that cost about as much as the ATS3B. It is big and heavy and works real good.

73 Karl K5DI

1298. Re: It's in the mail

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-04 22:31:09 UTC
From: John L. Sielke
Topic: 1297 Message: 1298

--- In AT_Sprint@yahoogroups.com, Karl Larsen <k5di@...> wrote:
>
> How ever it turns out, I have sent Steve my order for a ATS3B and
> will await delivery. I have enough solder laden paste to do it, and
will
> try for both sides in two heats. Tomorrow I will chase the Fox on 20
> meters with my current ATS3 in a Altoids tin. The key now is a
Vibroplex
> Paddle that cost about as much as the ATS3B. It is big and heavy and
> works real good.
>
> 73 Karl K5DI
>

I'm curious. How did you manage that since the ATS3B has not even been
listed yet? I haven't even seen the firm price yet. Or possibly you
are a beta tester?

John W2AGN

1299. Re: [AT_Sprint] Re: It's in the mail

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-04 22:43:41 UTC
From: Karl Larsen
Topic: 1297 Message: 1299

John L. Sielke wrote:
> --- In AT_Sprint@yahoogroups.com, Karl Larsen <k5di@...> wrote:
>
>> How ever it turns out, I have sent Steve my order for a ATS3B and
>> will await delivery. I have enough solder laden paste to do it, and
>>
> will
>
>> try for both sides in two heats. Tomorrow I will chase the Fox on 20
>> meters with my current ATS3 in a Altoids tin. The key now is a
>>
> Vibroplex
>
>> Paddle that cost about as much as the ATS3B. It is big and heavy and
>> works real good.
>>
>> 73 Karl K5DI
>>
>>
>
> I'm curious. How did you manage that since the ATS3B has not even been
> listed yet? I haven't even seen the firm price yet. Or possibly you
> are a beta tester?
>
> John W2AGN
>
>
>
Hi John, about 5 or 6 messages back Steve said the price will be $190.00
which was right on my guess. So I decided to get my order in early.

72,73
Karl
>
> Yahoo! Groups Links
>
>
>
>
>
>
>

1300. Re: [AT_Sprint] It's in the mail

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-04 23:10:04 UTC
From: Rob May
Topic: 1297 Message: 1300

I got the impression that $190 was a guesstimate, not a firm price. Unless Steven has all the components on hand I don't think he can state a definite price. Component prices continue to rise. As soon as Steven says he's ready to accept orders, I'll send in my check. Seems like that may be a month or more away.
Rob
NV5E

>From: Karl Larsen <k5di@...>
>Reply-To: AT_Sprint@yahoogroups.com
>To: AT_Sprint@yahoogroups.com
>Subject: Re: [AT_Sprint] Re: It's in the mail
>Date: Wed, 04 Jul 2007 16:43:41 -0600
>
>John L. Sielke wrote:
> > --- In AT_Sprint@yahoogroups.com, Karl Larsen <k5di@...> wrote:
> >
> >> How ever it turns out, I have sent Steve my order for a ATS3B and
> >> will await delivery. I have enough solder laden paste to do it, and
> >>
> > will
> >
> >> try for both sides in two heats. Tomorrow I will chase the Fox on 20
> >> meters with my current ATS3 in a Altoids tin. The key now is a
> >>
> > Vibroplex
> >
> >> Paddle that cost about as much as the ATS3B. It is big and heavy and
> >> works real good.
> >>
> >> 73 Karl K5DI
> >>
> >>
> >
> > I'm curious. How did you manage that since the ATS3B has not even been
> > listed yet? I haven't even seen the firm price yet. Or possibly you
> > are a beta tester?
> >
> > John W2AGN
> >
> >
> >
>Hi John, about 5 or 6 messages back Steve said the price will be $190.00
>which was right on my guess. So I decided to get my order in early.
>

>72,73
>Karl
> >
> > Yahoo! Groups Links
> >
> >
> >
> >
> >
> >
>

Need a brain boost? Recharge with a stimulating game. Play now!?
http://club.live.com/home.aspx?icid=club_hotmailtextlink1

1301. Re:3a price??? 3b price guess???

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-05 12:17:14 UTC
From: Andrew O. Ojwang
Topic: 1264 Message: 1301

You are right, but QRP kit designers have been known to supply kits based on relative personal circumstances, to Radio Amateur's who qualify under Amateur Radio circumstances it is the fun of Amateur radio. Steve has changes his pricing once or twice.

You sell your car to buy ATS3B, I will ask for a credit card to buy it.

And I hope at least I can learn from the schematic to propel an ATS3c, ATS3d and so on.

73,
Andrew(5Z4FT/KI4LTH

--
This message has been scanned for viruses and dangerous content by MailScanner, and is believed to be clean.

1302. Re: It's in the mail

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-05 20:03:33 UTC
From: John Graf
Topic: 1297 Message: 1302

Steve -- perhaps you could comment? Would sending an order in now be a help or a hindrance?

John, WA6L

--- In AT_Sprint@yahoogroups.com, "Rob May" <roblitespeed@...> wrote:
>
> I got the impression that $190 was a guesstimate, not a firm price. Unless
> Steven has all the components on hand I don't think he can state a definite
> price. Component prices continue to rise. As soon as Steven says he's
> ready to accept orders, I'll send in my check. Seems like that may be a
> month or more away.
> Rob
> NV5E
>
>
> >From: Karl Larsen <k5di@...>
> >Reply-To: AT_Sprint@yahoogroups.com
> >To: AT_Sprint@yahoogroups.com
> >Subject: Re: [AT_Sprint] Re: It's in the mail
> >Date: Wed, 04 Jul 2007 16:43:41 -0600
> >
> >John L. Sielke wrote:
> > > --- In AT_Sprint@yahoogroups.com, Karl Larsen <k5di@> wrote:
> > >
> > >> How ever it turns out, I have sent Steve my order for a ATS3B and
> > >> will await delivery. I have enough solder laden paste to do it, and
> > >>
> > > will
> > >
> > >> try for both sides in two heats. Tomorrow I will chase the Fox on 20
> > >> meters with my current ATS3 in a Altoids tin. The key now is a
> > >>
> > > Vibroplex
> > >
> > >> Paddle that cost about as much as the ATS3B. It is big and heavy and
> > >> works real good.
> > >>
> > >> 73 Karl K5DI
> > >>
> > >>
> > >
> > > I'm curious. How did you manage that since the ATS3B has not even been
> > > listed yet? I haven't even seen the firm price yet. Or possibly you
> > > are a beta tester?

> > >
> > > John W2AGN
> > >
> > >
> > >
> >Hi John, about 5 or 6 messages back Steve said the price will be $190.00
> >which was right on my guess. So I decided to get my order in early.
> >
> >72,73
> >Karl
> > >
> > > Yahoo! Groups Links
> > >
> > >
> > >
> > >
> > >
> > >
> > >
> >
>
> --
> Need a brain boost? Recharge with a stimulating game. Play now!
> http://club.live.com/home.aspx?icid=club_hotmailtextlink1
>

1303. NO NOT ORDER ATS3B's YET!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-05 20:24:57 UTC
From: Steven Weber
Topic: 1297 Message: 1303

Gang,

Please don't order any of these yet! I have enough to do already and keeping track of pre-orders, keeping want lists, etc, just slows down the work that has to be done first. And there's still pleanty of that to do. Maybe I'll have everything ready sometime in August, but I have a lot of distractions during the summer, so Sept is still more likely. Keeping track of Paypal is a real pain for me and I'd really rather you not use that method unless there is no other choice, like your a DX station.

Thanks for your understanding.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

1304. Re: [AT_Sprint] Re: It's in the mail

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-05 20:27:13 UTC
From: Kurt Savegnago
Topic: 1297 Message: 1304

--- John Graf <john@...> wrote:

>
> Steve -- perhaps you could comment? Would sending
> an order in now be a help or a
> hindrance?
>
> John, WA6L

I had a private email with Steve about preorders 6
months ago. He prefers not to do that because it
takes work to keep track of them. I suspect with the
popularity of the Sprint series, he'll try to make
enough to satisfy the supply. I'd be curious if he
has noticed increasing popularity with each production
run. I noticed with the 3A there were still some
"stragglers" that wanted to buy but it was out of
production at that time they found out about the rig.

Kurt Savegnago
KC9LDH

Slackware user since 1994

1305. Re: [AT_Sprint] Re: It's in the mail

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-05 20:30:58 UTC
From: Kurt Savegnago
Topic: 1297 Message: 1305

Sorry,

That should be "satisfy the demand" not supply.
Missed that error before I hit the send button.

Kurt

Slackware user since 1994

1306. Re: [AT_Sprint] NO NOT ORDER ATS3B's YET!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-06 14:36:11 UTC
From: Lee Boulineau
Topic: 1297 Message: 1306

Steve,

Isn't it nice to feel like a rock star?!?! Now if you
play guitar.....................

Lee N4MVL

--- Steven Weber <kd1jv@...> wrote:

> Gang,
>
> Please don't order any of these yet! I have enough
> to do already and
> keeping track of pre-orders, keeping want lists,
> etc, just slows down the
> work that has to be done first. And there's still
> pleanty of that to do.
> Maybe I'll have everything ready sometime in August,
> but I have a lot of
> distractions during the summer, so Sept is still
> more likely. Keeping track
> of Paypal is a real pain for me and I'd really
> rather you not use that
> method unless there is no other choice, like your a
> DX station.
>
> Thanks for your understanding.
>
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com
>

Need a vacation? Get great deals
to amazing places on Yahoo! Travel.
http://travel.yahoo.com/

1307. Obsolete ATS Disposition

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-06 15:01:55 UTC
From: Mark Brueggemann
Topic: 1297 Message: 1307

Was just thinking, since Steve doesn't sell a particular version
more than one production run, how 'bout releasing the design files
for old versions? The version 3 and 3a ATS's were very popular for
what they were, and maybe some individual or group could take on
the project of sourcing boards and parts for additional runs of
these versions. It's up to Steve if he'd be willing to give his
PWB design files away, but it'd be one way to satisfy some of the
demand that always seems to exceed the supply. That way Steve
is free to work on current/future design, production and kitting.

Mark K5LXP
Albuquerque, NM

1308. Re: Obsolete ATS Disposition

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-07 12:59:39 UTC
From: John Harper
Topic: 1297 Message: 1308

I believe some of Steve's kit designs are being sold by Doug Hendricks and have often wondered why the ATS series aren't among them, given the unanimous reviews of these rigs among those who own them. In the meantime, I'm eagerly awaiting the release of the ATS3B.

73,

John Harper AE5X
http://www.ae5x.com

--- In AT_Sprint@yahoogroups.com, Mark Brueggemann <qrq_cw@...> wrote:
>
> Was just thinking, since Steve doesn't sell a particular version
> more than one production run, how 'bout releasing the design files
> for old versions?

1309. Re: [AT_Sprint] Re: Obsolete ATS Disposition

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-07 13:25:33 UTC
From: Kurt Savegnago
Topic: 1297 Message: 1309

The short answer would be the cost and plus the fellow
might need his blessing/permission.

--- John Harper <ae5x@...> wrote:

> I believe some of Steve's kit designs are being sold
> by Doug Hendricks
> and have often wondered why the ATS series aren't
> among them, given
> the unanimous reviews of these rigs among those who
> own them. In the
> meantime, I'm eagerly awaiting the release of the
> ATS3B.
>
> 73,
>
> John Harper AE5X
> http://www.ae5x.com
>
>
>
> --- In AT_Sprint@yahoogroups.com, Mark Brueggemann
> <qrq_cw@...> wrote:
> >
> > Was just thinking, since Steve doesn't sell a
> particular version
> > more than one production run, how 'bout releasing
> the design files
> > for old versions?
>
>
>
>
> Yahoo! Groups Links
>
>
>
>
>

Slackware user since 1994

1310. Re: [AT_Sprint] Re: Obsolete ATS Disposition

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-07 13:30:08 UTC
From: Gil Stacy
Topic: 1297 Message: 1310
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

1311. Re: [AT_Sprint] Re: Obsolete ATS Disposition

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-07 14:14:00 UTC
From: kr4ez@aol.com
Topic: 1297 Message: 1311

Steve answered this a whille back saying he wanted to keep it a hobby and not turn it into a biesness. it is hard to believe he is covering the price of the parts for what little he charges for his kits. i think he could turn a profit with his kits if he wanted to. his ability to use non convintinal conponents for radios is fasinating.

-----Original Message-----

From: "John Harper" <ae5x@...>
Subj: [AT_Sprint] Re: Obsolete ATS Disposition
Date: Sat Jul 7, 2007 8:59
Size: 1K
To: AT_Sprint@yahoogroups.com

I believe some of Steve's kit designs are being sold by Doug Hendricks
and have often wondered why the ATS series aren't among them, given
the unanimous reviews of these rigs among those who own them. In the
meantime, I'm eagerly awaiting the release of the ATS3B.

73,

John Harper AE5X
http://www.ae5x.com

--- In AT_Sprint@yahoogroups.com, Mark Brueggemann <qrq_cw@...> wrote:
>
> Was just thinking, since Steve doesn't sell a particular version
> more than one production run, how 'bout releasing the design files
> for old versions?

Yahoo! Groups Links

1312. straight keys:

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-07 14:22:59 UTC
From: chris reeves
Topic: 1312 Message: 1312

i just joined the skcc and it made me wander what kind of keys you all are using. i have 2 really cheap keys an old japaness j-38 copy and a chinness key marked speed x. needless to say these keys feel mushy and i am looking to upgrade. i was going to go to a iambic but due to my low speed i do not think that would be a good idea at least for now.

1313. Re: [AT_Sprint] Re: Obsolete ATS Disposition

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-07 15:04:22 UTC
From: Lee Boulineau
Topic: 1297 Message: 1313

Look at it this way - Steve is continuing to improve
the ATS series with each release. It is possible that
he will transfer it over to Doug or someone else for
regular kitting at some point. I would suspect that he
might do this when he gets to the point where 1) he
feels that the design can't be reasonably improved
upon, or 2) when he gets tired of screwing with the
design entirely and wants to do something else. I'm
also quite impressed with Steve's designs, and am
counting my pennies so that I have the $$$ for the 3B
when it comes out. Now if we could get a 20-10m 10-20w
SSB rig out of him before the next sunspot cycle
peaks.............

Lee N4MVL
"one of the many KD1JV fans"

--- kr4ez@... wrote:

> Steve answered this a whille back saying he wanted
> to keep it a hobby and not turn it into a biesness.
> it is hard to believe he is covering the price of
> the parts for what little he charges for his kits. i
> think he could turn a profit with his kits if he
> wanted to. his ability to use non convintinal
> conponents for radios is fasinating.
>
> -----Original Message-----
>
> From: "John Harper" <ae5x@...>
> Subj: [AT_Sprint] Re: Obsolete ATS Disposition
> Date: Sat Jul 7, 2007 8:59
> Size: 1K
> To: AT_Sprint@yahoogroups.com
>
> I believe some of Steve's kit designs are being sold
> by Doug Hendricks
> and have often wondered why the ATS series aren't
> among them, given
> the unanimous reviews of these rigs among those who
> own them. In the
> meantime, I'm eagerly awaiting the release of the
> ATS3B.
>
> 73,
>

> John Harper AE5X
> http://www.ae5x.com
>
>
>
> --- In AT_Sprint@yahoogroups.com, Mark Brueggemann
> <qrq_cw@...> wrote:
> >
> > Was just thinking, since Steve doesn't sell a
> particular version
> > more than one production run, how 'bout releasing
> the design files
> > for old versions?
>
>
>
>
> Yahoo! Groups Links
>
>
>
>
>

Get the free Yahoo! toolbar and rest assured with the added security of spyware protection.
http://new.toolbar.yahoo.com/toolbar/features/norton/index.php

1314. straight keys:

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-07 21:32:02 UTC
From: chris reeves
Topic: 1312 Message: 1314

i just joined the skcc and it made me wander what kind of keys you all are using. i have 2 really cheap keys an old japaness j-38 copy and a chinness key marked speed x. needless to say these keys feel mushy and i am looking to upgrade. i was going to go to a iambic but due to my low speed i do not think that would be a good idea at least for now.

1315. Re: [AT_Sprint] straight keys:

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-07 21:40:42 UTC
From: Karl Larsen
Topic: 1312 Message: 1315

chris reeves wrote:
> i just joined the skcc and it made me wander what kind of keys you all are using. i have 2 really cheap keys an old japaness j-38 copy and a chinness key marked speed x. needless to say these keys feel mushy and i am looking to upgrade. i was going to go to a iambic but due to my low speed i do not think that would be a good idea at least for now.
>
>
>
>
> Yahoo! Groups Links
>
>
>
>
>
>
I use a nice new paddle. The ATS radios have a speed control down to
your speed. So put up those straight keys. They always sound like one.

Karl

1316. Re: [AT_Sprint] straight keys: a beautiful thing!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-07 23:12:48 UTC
From: john
Topic: 1312 Message: 1316

At 05:40 PM 7/7/2007, Karl Larsen wrote:
>So put up those straight keys. They always sound like one.

Yes! And thank goodness they do! Let's hear it for some originality in a fist! Likewise, some personality in the fist of a first class Bug operator, is a thing of beauty.

Machine generated CW is nice, but sterile. It's great to hear the character of a well practiced straight key or bug op.

Hard to pump a straight key at 20+ though...at least for me!

John K5MO

1317. RE: [AT_Sprint] straight keys:

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-07 23:45:40 UTC
From: Ken Lotts
Topic: 1312 Message: 1317

One problem with using the straight key on the ATS3 is that you end up forfeiting menu command capabilities plus (on *my* ATS3), the side tone sounds unbearably ringy (unless I use the built in keyer).

On the other hand, using the built in keyer on the ATS3 at slow speeds with an iambic paddle is not easy (at least for me). The problem goes away once I dial the speed up to about 22 WPM but at 18 WPM and less I make a lot of sending goofs (using either of the two modes). I suspect this is just the result of some lazy habit I picked up over the years using a different keyer.

I am on a quest to find an ultra light & reliable iambic paddle that is rugged enough to survive inside my backpack.

I love my Palm Radio Mini Paddles but they weigh as much as my ATS3 does. Three ounces for a paddle was negligible when packing with my Sierra or my unbearable-to-carry K2 but those days are over. I am now enjoying the many benefits of ultra light backpacking and try to keep my "base weight" down to around ten pounds even with a complete ham radio station. "Base weight" is defined as everything minus consumables (such as food, water & cooking fuel)

I have queued a project to install a surface mount version of the touch paddle circuit "P3SMD" inside my ATS3 and hope to homebrew a touch paddle right on the Altoids tin using a tiny section of a closed foam sleeping pad. It will be an interesting project once I get to it.

Ken Lotts
aa7jc

-----Original Message-----
From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com]On Behalf Of chris reeves
Sent: Saturday, July 07, 2007 2:32 PM
To: AT_Sprint@yahoogroups.com
Subject: [AT_Sprint] straight keys:

i just joined the skcc and it made me wander what kind of keys you all are using. i have 2 really cheap keys an old japaness j-38 copy and a chinness key marked speed x. needless to say these keys feel mushy and i am looking to upgrade. i was going to go to a iambic but due to my low speed i do not think that would be a good idea at least for now.

1318. Re: [AT_Sprint] straight keys: a beautiful thing!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-08 02:09:18 UTC
From: Richard McKee
Topic: 1312 Message: 1318

Hard to pump a straight key at 20+ though...at least for me! [snip]

I can go about 15 wpm for a little while on the J-38, but I like about 12
wpm tops on the it !

Rick McKee, KC8AON, Ohio - www.angelfire.com/electronic2/qrp
Monthly QRP Field Day Group - http://groups.yahoo.com/group/MQFD/
With God all things are possible <><

1319. Re: [AT_Sprint] straight keys:

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-08 02:07:45 UTC
From: Richard McKee
Topic: 1312 Message: 1319

I use a nice new paddle. The ATS radios have a speed control down to
your speed. So put up those straight keys. They always sound like one.
[snip]

Karl,
A straight key doesn't sound like a straight key if you use it right -
I love my J-38 !

Rick McKee, KC8AON, Ohio - www.angelfire.com/electronic2/qrp
Monthly QRP Field Day Group - http://groups.yahoo.com/group/MQFD/
With God all things are possible <><

1320. Re: [AT_Sprint] straight keys:

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-08 03:07:46 UTC
From: Richard Bennett
Topic: 1312 Message: 1320

The great thing about straight key operation is that each operator shows their personal "style" much moreso than with paddles. Don't get me wrong, I can't operate a straight key any better than I can fly to the moon, but it is neat QSOing with a SK operator with a good fist.

de KC0PET

----- Original Message -----
From: Richard McKee
To: AT_Sprint@yahoogroups.com
Sent: 07/07/2007 9:29:07 PM
Subject: Re: [AT_Sprint] straight keys:

I use a nice new paddle. The ATS radios have a speed control down to
your speed. So put up those straight keys. They always sound like one.
[snip]

Karl,
A straight key doesn't sound like a straight key if you use it right -
I love my J-38 !

Rick McKee, KC8AON, Ohio - www.angelfire.com/electronic2/qrp
Monthly QRP Field Day Group - http://groups.yahoo.com/group/MQFD/
With God all things are possible <><

1321. Re: straight keys:

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-08 04:18:27 UTC
From: radio_kx0r
Topic: 1312 Message: 1321

I didn't switch to paddles until I was close to age 50, about 8 or 9 years ago. I worked DX, contests, and Field Day, plus many rag chews, with an old brass key from the '30's. I can go close to 20 WPM and still sound OK (with enough caffeine) - but 17 WPM is much more comfortable. I do get tired of it after a while.

I believe that in the old days there were lots of good SK ops who could go much faster than this, and they did regularly. It's a matter of practice. Good musicians are much faster with their fingers, but they practice to get that way.

A couple of pointers if you want to master your straight key:
0) Use a quality key. Many that are for sale will limit you. The J38 style is OK. Many of the fancy keys are not very fast.
1) Mount the key firmly to the table with screws. It should feel solid as a rock for best results.
2) Set the contact gap real close - the thickness of a sheet of paper or less. Clean the contacts once in a while.
3) Set the spring tension light, but play with it to get the best action. It must resonate with your wrist.
4) The key lever and knob should not be too massive.
5) Rest your arm on the table and let your wrist float and flex. If you get it right you'll find that the dits sort of resonate out of your wrist.
6) Your style will change as you speed up. You may have to re-adjust your key and change your position as your skill rises.

Sending at high speeds with a straight key may produce repetive motion injury or carpal tunnel problems in some people. In the old days they called it "glass arm". If there were still lots of paid telegraphers with straight keys, we would have lots of workman's compensation cases and lawsuits today. Nevertheless, an hour ragchewing with a straight key can be a lot of fun, particularly if you have a good sidetone or monitoring ability for the necessary feedback. If it screws up your arm or wrist and it hurts, use paddles.

One of the nicest experiences in our hobby is when you ragchew with another SK operator and have a great QSO. It's a fine art. It certainly is very personal and expressive when done right. You can put a little weight and emphasis into your sending without causing any difficulty.

If you like ragchewing, using a straight key can add some fun!

KX0R

> The great thing about straight key operation is that each operator
shows their personal "style" much moreso than with paddles. Don't
get me wrong, I can't operate a straight key any better than I can
fly to the moon, but it is neat QSOing with a SK operator with a good
fist.
>
> de KC0PET
>
>
> ----- Original Message -----
> From: Richard McKee
> To: AT_Sprint@yahoogroups.com
> Sent: 07/07/2007 9:29:07 PM
> Subject: Re: [AT_Sprint] straight keys:
>
>
>
> I use a nice new paddle. The ATS radios have a speed control down
to
> your speed. So put up those straight keys. They always sound like
one.
> [snip]
>
> Karl,
> A straight key doesn't sound like a straight key if you use it
right -
> I love my J-38 !
>
> Rick McKee, KC8AON, Ohio - www.angelfire.com/electronic2/qrp
> Monthly QRP Field Day Group - http://groups.yahoo.com/group/MQFD/
> With God all things are possible <><
>

1322. Re: [AT_Sprint] Re: straight keys:

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-08 04:34:12 UTC
From: Hank Greeb
Topic: 1312 Message: 1322

Or, you can send with a definite Lake Erie Swing likes of which I've
been accused.

I've sent with J-38's, Rat Shack Specials, Some sort of Navy Key, and a
couple pieces of wire, and have been able to make good enough code for
most any half way competent operator understand me. I passed the 20 WPM
sending test before the FCC in the Denver office with a J-38. I don't
like sending at 20 WPM with a straight key, and I don't know if I could
do it now, since I'm out of practice, but it's doable.

I also use a bug - and will use a bug again when I find it from my
recent move. It's a Vibroplex Blue Racer, probably 50 years olde, and
except for several replacement jewels, I've never needed any servicing
of it.

I've never been able to get the hang of an electronic key. I either use
a couple pieces of wire or my computer to send code now that I've
misplaced my bug and by J-38 during a recent move.

I've also heard many folks who couldn't even send their own call without
errors with whatever electronic gadget they were trying to use. In my
book, the only valid reason for that is the aftermath of a stroke or
other debilitating physical disease which affects muscle coordination.

72 de n8xx Hg

radio_kx0r wrote:

I didn't switch to paddles until I was close to age 50, about 8 or 9
years ago. I worked DX, contests, and Field Day, plus many rag chews,
with an old brass key from the '30's. I can go close to 20 WPM and still
sound OK (with enough caffeine) - but 17 WPM is much more comfortable. I
do get tired of it after a while.

I believe that in the old days there were lots of good SK ops who could
go much faster than this, and they did regularly. It's a matter of
practice. Good musicians are much faster with their fingers, but they
practice to get that way.

A couple of pointers if you want to master your straight key:
0) Use a quality key. Many that are for sale will limit you. The J38
style is OK. Many of the fancy keys are not very fast.
1) Mount the key firmly to the table with screws. It should feel solid
as a rock for best results.
2) Set the contact gap real close - the thickness of a sheet of paper or
less. Clean the contacts once in a while.
3) Set the spring tension light, but play with it to get the best

action. It must resonate with your wrist.
4) The key lever and knob should not be too massive.
5) Rest your arm on the table and let your wrist float and flex. If you get it right you'll find that the dits sort of resonate out of your wrist.
6) Your style will change as you speed up. You may have to re-adjust your key and change your position as your skill rises.

Sending at high speeds with a straight key may produce repetive motion injury or carpal tunnel problems in some people. In the old days they called it "glass arm". If there were still lots of paid telegraphers with straight keys, we would have lots of workman's compensation cases and lawsuits today. Nevertheless, an hour ragchewing with a straight key can be a lot of fun, particularly if you have a good sidetone or monitoring ability for the necessary feedback. If it screws up your arm or wrist and it hurts, use paddles.

One of the nicest experiences in our hobby is when you ragchew with another SK operator and have a great QSO. It's a fine art. It certainly is very personal and expressive when done right. You can put a little weight and emphasis into your sending without causing any difficulty.

If you like ragchewing, using a straight key can add some fun!

KX0R

> <http://groups.yahoo.com/group/AT_Sprint/message/1312;_ylc=X3oDMTM1bWtpM3Q3BF9TAzk3MzU5NzE0BGdycElkAzE4MDM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARtc2dJZAMxMzIxBHNlYwNmdHIEc2xrA3Z0cGMEc3RpbWUDMTE4Mzg2ODMxMwR0cGNJZAMxMzEy>
> <http://groups.yahoo.com/group/AT_Sprint/post;_ylc=X3oDMTJxY2llbDAzBF9TAzk3MzU5NzE0BGdycElkAzE4MDM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARtc2dJZAMxMzIxBHNlYwNmdHIEc2xrA3JwbHkEc3RpbWUDMTE4Mzg2ODMxMw--?act=reply&messageNum=1321>
> <http://groups.yahoo.com/group/AT_Sprint/post;_ylc=X3oDMTJmaDE4MWxsBF9TAzk3MzU5NzE0BGdycElkAzE4MDM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARzZWMDZnRyBHNsawNudHBjBHN0aW1lAzExODM4NjgzMTM->
>
> <http://groups.yahoo.com/group/AT_Sprint/messages;_ylc=X3oDMTJmbTU3M2FjBF9TAzk3MzU5NzE0BGdycElkAzE4MDM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARzZWMDZnRyBHNsawNtc2dzBHN0aW1lAzExODM4NjgzMTM->
> <http://groups.yahoo.com/group/AT_Sprint/files;_ylc=X3oDMTJnc3VsMG9oBF9TAzk3MzU5NzE0BGdycElkAzE4MDM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARzZWMDZnRyBHNsawNmaWxlcwRzdGltZQMxMTgzODY4MzEz>
> <http://groups.yahoo.com/group/AT_Sprint/photos;_ylc=X3oDMTJmNGpya3JsBF9TAzk3MzU5NzE0BGdycElkAzE4MDM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARzZWMDZnRyBHNsawNwaG90BHN0aW1lAzExODM4NjgzMTM->
> <http://groups.yahoo.com/group/AT_Sprint/links;_ylc=X3oDMTJnOHEzMXFqBF9TAzk3MzU5NzE0BGdycElkAzE4MDM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARzZWMDZnRyBHNsawNsaW5rcwRzdGltZQMxMTgzODY4MzEz>
> <http://groups.yahoo.com/group/AT_Sprint/database;_ylc=X3oDMTJkMGJvYzN1BF9TAzk3MzU5NzE0BGdycElkAzE4MDM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARzZWMDZnRyBHNsawNkYgRzdGltZQMxMTgzODY4MzEz>
> <http://groups.yahoo.com/group/AT_Sprint/polls;_ylc=X3oDMTJnbGptaDhmBF9TAzk3MzU5NzE0BGdycElkAzE4MDM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARzZWMDZnRyBHNsawNwb2xscwRzdGltZQMxMTgzODY4MzEz>
> <http://groups.yahoo.com/group/AT_Sprint/members;_ylc=X3oDMTJmNHE3anU1BF9TAzk3MzU5NzE0BGdycElkAzE4MDM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARzZWMDZnRyBHNsawNtYnJzBHN0aW1lAzExODM4NjgzMTM->
>
> <http://groups.yahoo.com/group/AT_Sprint/calendar;_ylc=X3oDMTJlaHI5bnJlBF9TAzk3MzU5NzE0B

GdycElkAzE4MDM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARzZWMDZnRyBHNsawNjYWwEc3RpbWUDMTE4Mzg2ODMxMw--
->
>
> <>
> <http://groups.yahoo.com/;_ylc=X3oDMTJlaDRmaHZjBF9TAzk3MzU5NzE0BGdycElkAzE4MDM1NzIzBGdyc
HNwSWQDMTcwNTA2MzEwOARzZWMDZnRyBHNsawNnZnAEc3RpbWUDMTE4Mzg2ODMxMw-->
> <http://groups.yahoo.com/group/AT_Sprint/join;_ylc=X3oDMTJnYnNpaGZoBF9TAzk3MzU5NzE0BGdyc
ElkAzE4MDM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARzZWMDZnRyBHNsawNzdG5ncwRzdGltZQMxMTgzODY4MzEz>
> <mailto:AT_Sprint-digest@yahoogroups.com?subject=Email%20Delivery:%20Digest>
> <mailto:AT_Sprint-traditional@yahoogroups.com?subject=Change%20Delivery%20Format:%20Trad
itional>
> <http://groups.yahoo.com/group/AT_Sprint;_ylc=X3oDMTJlcXI3bWV0BF9TAzk3MzU5NzE0BGdycElkAz
E4MDM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARzZWMDZnRyBHNsawNocGYEc3RpbWUDMTE4Mzg2ODMxMw-->
> <http://docs.yahoo.com/info/terms/>
> <mailto:AT_Sprint-unsubscribe@yahoogroups.com?subject=>

1323. Re: [AT_Sprint] straight keys:

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-08 16:46:42 UTC
From: Herman
Topic: 1312 Message: 1323

On Sat, 2007-07-07 at 15:40 -0600, Karl Larsen wrote:
> chris reeves wrote:
> > i just joined the skcc and it made me wander what kind of keys you
> all are using. i have 2 really cheap keys an old japaness j-38 copy
> and a chinness key marked speed x. needless to say these keys feel
> mushy and i am looking to upgrade. i was going to go to a iambic but
> due to my low speed i do not think that would be a good idea at least
> for now.
> >
> >
> I use a nice new paddle. The ATS radios have a speed control down to
> your speed. So put up those straight keys. They always sound like one.
>
> Karl

If you have some scrap PC board you can make one for virtually nothing.
http://www.geocities.com/n2uhc/paddle.html

I have excellent results with it (I built 4 or 5).
Elevate the the paddle by mounting on a 1" piece of wood AND
make he paddle-lever longer so it sticks out
Matches portable QRP very well.

Herman N0JN/du7 near Cebu.

1324. Re: [AT_Sprint] straight keys:

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-08 21:13:24 UTC
From: james.rushforth@tesco.net
Topic: 1312 Message: 1324

Hi Chris
Re your request about keys. I use an ex WD (War Dept) key I picked up as a boy (I'm now 56. It is marked KEY W.T 8 AMP No 2 MK III). Like you my CW is rather slow and although I have a paddle keyer I always manage to send too many dots, so revert to the ex WD.
For QRP transmitters which are, for portable purposes, usually small it seems a little bizzare to use a key the same size as the rig. I have recently tried using a microswitch which measures about 2cm x 2cm x 1cm. I use this in one of two ways:
- for cold weather when out on the hills I use my thumb on the switch and this has the advantage that I can keep my hand in a warm pocket!
- When its warmer I hold the microswitch in my hand, as if I were holding the knob on the key, and tap the contact (which has a nylon roller on the end) on the microswitch agains by arm, knee or anything else!

This is not a perfect solution, but I can send reasonably accurate code at 12-15wpm.

There are lots of good ideas for HB small keys on the Net.

Best wishes

Jim G3ZPD

> From: "chris reeves" <kr4ez@...>
> Date: 2007/07/07 Sat PM 03:22:59 BST
> To: AT_Sprint@yahoogroups.com
> Subject: [AT_Sprint] straight keys:
>
> i just joined the skcc and it made me wander what kind of keys you all are using. i have 2 really cheap keys an old japaness j-38 copy and a chinness key marked speed x. needless to say these keys feel mushy and i am looking to upgrade. i was going to go to a iambic but due to my low speed i do not think that would be a good idea at least for now.
>
>
>

1325. Re: ATS-3B progress report

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-10 18:53:19 UTC
From: Steven Weber
Topic: 1264 Message: 1325

The ATS-3B prototype got a good work out this weekend at Lobstercon. It got out to the west coast and into Europe on 40M, no problem. Of course, the "88" up about 50 feet and being near the ocean helped :-)

The general consensous was the LED read out for frequency is a worth while addition. I've also decided to add a current sense chip to the PA supply. It will rest the MPU if the current exceeds about 800 ma. This should be low enough to protect the 2N7000's and keying fet if things get out of hand, but is high enough to support 5 watts out, with some margin.

I've got more parts on order today and hopefully will be ordering boards soon. I'll see about uploading some pictures of the board to the gallery later tonight.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

1326. Re: [AT_Sprint] Re: ATS-3B progress report

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-10 21:34:26 UTC
From: john
Topic: 1264 Message: 1326

Sounds great Steve... anxious to see them!

John K5MO

At 02:53 PM 7/10/2007, you wrote:
>The ATS-3B prototype got a good work out this weekend at Lobstercon. It got
>out to the west coast and into Europe on 40M, no problem. Of course, the
>"88" up about 50 feet and being near the ocean helped :-)
>
>The general consensous was the LED read out for frequency is a worth while
>addition. I've also decided to add a current sense chip to the PA supply.
>It will rest the MPU if the current exceeds about 800 ma. This should be
>low enough to protect the 2N7000's and keying fet if things get out of
>hand, but is high enough to support 5 watts out, with some margin.
>
>I've got more parts on order today and hopefully will be ordering boards
>soon. I'll see about uploading some pictures of the board to the gallery
>later tonight.
>72,
>Steve, KD1JV
>"Melt Solder"
>White Mountains of New Hampshire
>http://kd1jv.qrpradio.com
>
>
>
>Yahoo! Groups Links
>
>
>

1327. Re: ATS-3B progress report

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-11 15:22:34 UTC
From: radio_kx0r
Topic: 1264 Message: 1327

Steve,

The current protection would be a nice improvement. This might be faster and better than the polyswitch (PTC) I put in my ATS-3A.

Just for curiosity, what kind of tuner and feedline do you use with that "88" at 50 feet?

Thanks,
KX0R

> The ATS-3B prototype got a good work out this weekend at Lobstercon. It got
> out to the west coast and into Europe on 40M, no problem. Of course, the
> "88" up about 50 feet and being near the ocean helped :-)
>
> The general consensous was the LED read out for frequency is a worth while
> addition. I've also decided to add a current sense chip to the PA supply.
> It will rest the MPU if the current exceeds about 800 ma. This should be
> low enough to protect the 2N7000's and keying fet if things get out of
> hand, but is high enough to support 5 watts out, with some margin.
>
> I've got more parts on order today and hopefully will be ordering boards
> soon. I'll see about uploading some pictures of the board to the gallery
> later tonight.
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com
>

1328. Re: ATS-3B progress report

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-11 20:20:11 UTC
From: Bruce Beford
Topic: 1264 Message: 1328

--- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@...> wrote:

> Just for curiosity, what kind of tuner and feedline do you use with
> that "88" at 50 feet?
>
> Thanks,
> KX0R
>

The 88ft doublet we used at Lobstercon was fed with 450 ohm windowed ladder line. I don't recall what we used for a tuner. Most likely a small z-match.

-Bruce N1RX

1329. Re: [AT_Sprint] Re: ATS-3B progress report

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-11 22:48:07 UTC
From: Steven Weber
Topic: 1264 Message: 1329

>The current protection would be a nice improvement. This might be
>faster and better than the polyswitch (PTC) I put in my ATS-3A.
>
Yes, it should react pretty quickly. Hopefully quickly enough if its needed.

>Just for curiosity, what kind of tuner and feedline do you use with
>that "88" at 50 feet?
>
The feed line was standard 450 ohm window line and the tuner was a homebrew
Z tuner AA1MY built.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

1330. Re: [AT_Sprint] 3a price??? 3b price guess???

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-03 18:05:51 UTC
From: michael taylor
Topic: 1264 Message: 1330

On 7/3/07, WE0H <we0h@...> wrote:
> How much was the 3a model? No one has answered my question on a rough
> ass guess on the 3b price so I'd at least have some idea if it is $100,
> $300 or what price range.

$165 US (postpaid within US)

<http://shurl.org/xToFK>
(redirects to Google cache of Steve's AT Sprint 3A page)

-Michael, VE3TIX

1331. Describe your ATS station?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-12 14:25:01 UTC
From: Tim
Topic: 1331 Message: 1331

Hi Folks,

Like many, I'm anxiously awaiting the release of the -3B. I'm also completely inexperienced at portable ops. I'd like to hear what you are using for your complete portable station - from power supply/batteries to antennas/feed lines and everything in between. That will help me get a feel for the "other stuff" I'm going to need.

Tnx es 72 de Tim KX3H

1332. Re: [AT_Sprint] Describe your ATS station?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-12 15:36:26 UTC
From: Kurt Savegnago
Topic: 1331 Message: 1332

To add,

I wonder if 12V ops would be reasonably safe with
the availability of small lead, Nimh and 11.1V Li
batteries with the new protection circuits planned.

Kurt
KC9LDH
--- Tim <bipetype@...> wrote:

> Hi Folks,
>
> Like many, I'm anxiously awaiting the release of the
> -3B. I'm also
> completely inexperienced at portable ops. I'd like
> to hear what you
> are using for your complete portable station - from
> power
> supply/batteries to antennas/feed lines and
> everything in between.
> That will help me get a feel for the "other stuff"
> I'm going to need.
>
> Tnx es 72 de Tim KX3H
>
>
>
>
> Yahoo! Groups Links
>
>
>
>
>

Slackware user since 1994

1333. RE: [AT_Sprint] Describe your ATS station?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-12 16:31:19 UTC
From: andrew.macallister@emersonprocess.com
Topic: 1331 Message: 1333

My PORTABLE station includes a commercial vertical on 20M with 3 ground radials and 40' of RG8X. I think it is the Hy-Gain single-band vertical. It is pretuned for the lowest SWR on 14.060 MHz. I usually don't do other bands when portable, but have a dipole for 40M if needed. The telescoping sections on the vertical are marked so that no additional tuning is required upon arrival at any remote site. The ATS-3a is completely self contained with internal batteries, etc. See the photos in the Photos section for W5ACM for my ATS-3 and ATS-3a. The batteries in the ATS-3a are two 200 maH LiPo - good for about two hours. I have two 650 maH LiPo in my ATS-3 - good for over 6 hours. Power output is about 3 Watts with the 7.4 - 8 VDC from the LiPo batteries (http://www.batteriesamerica.com <http://www.batteriesamerica.com/>).

Andy W5ACM

From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com] On Behalf Of Tim
Sent: Thursday, July 12, 2007 9:25 AM
To: AT_Sprint@yahoogroups.com
Subject: [AT_Sprint] Describe your ATS station?

Hi Folks,

Like many, I'm anxiously awaiting the release of the -3B. I'm also completely inexperienced at portable ops. I'd like to hear what you are using for your complete portable station - from power supply/batteries to antennas/feed lines and everything in between. That will help me get a feel for the "other stuff" I'm going to need.

Tnx es 72 de Tim KX3H

1334. Re: [AT_Sprint] Describe your ATS station?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-12 17:05:36 UTC
From: Mark Brueggemann
Topic: 1331 Message: 1334

--- Tim <bipetype@...> wrote:

> I'd like to hear what you are using for your complete
> portable station -

ATS3
Elecraft T1 Tuner
8' RG-316 jumper with pigtails (T1 to ant)
2' RG-316 jumper (XCVR to T1)
26ga silver teflon wire, 24, 36 and 48 ft pieces.
6ea AA cell holder
Palm Key paddle
Earbuds

Fits in a small zippered shaving case.

Have taken this on several airline trips in carry-on luggage,
no problems with security. An appropriate length of antenna wire
is chosen for the proposed installation, and tossed/tied/strung
in place as a vertical, doublet, inverted L, V, etc. Turn on the
T1, hit the key, wait for the green light and I'm off and running.

A 6AA pack was chosen due to the ubiquitous nature of AA cell
availability pretty much anywhere in the world, so I don't
mess with rechargeables. Alkalines provide a decent run time,
and the ATS puts out about 2W at that input voltage with little
risk of damaging finals due to SWR (until the tuner tunes).
In a pinch I can disconnect the AA pack which has a 9V battery
style connection and use the 9V battery out of the T1 (once it
has tuned) and get a couple hours' operating out of that.

Mark K5LXP
Albuquerque, NM

1335. Re: [AT_Sprint] Describe your ATS station?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-12 19:00:39 UTC
From: AKBiocca@comcast.net
Topic: 1331 Message: 1335

Actually there is a new player in town that changes the Lithium battery game.

Lithium Iron Nano Phosphate (LiFePO4)

They have a slightly lower voltage, so 4 cells in series produce voltages up to 14.4 and avoids the overvoltage problems of Lithium Ion/Polymer. The current cells are 2.3AH.

These batteries don't catch fire and deliver more current than other Lithiums. Eric WD6CMU put together a 4S5P pack (4 serial 5 parallel = 20 cells) that is rated at 14.4V 10AH 3 pounds and delivers 200 Amps. It will start your car. They can be charged from empty to 90% in FIVE minutes.

I have started a web page with info and links on these batteries at:

http://www.hsfdg.org/wiki/LithiumIronBatteries

-- Alan, wb6zqz

--------------- Original message ---------------
From: Kurt Savegnago <ksaves2@...>

> To add,
>
> I wonder if 12V ops would be reasonably safe with
> the availability of small lead, Nimh and 11.1V Li
> batteries with the new protection circuits planned.
>
> Kurt
> KC9LDH
> --- Tim wrote:
>
> > Hi Folks,
> >
> > Like many, I'm anxiously awaiting the release of the
> > -3B. I'm also
> > completely inexperienced at portable ops. I'd like
> > to hear what you
> > are using for your complete portable station - from
> > power
> > supply/batteries to antennas/feed lines and
> > everything in between.
> > That will help me get a feel for the "other stuff"
> > I'm going to need.
> >
> > Tnx es 72 de Tim KX3H
> >
> >

> >
> >
> > Yahoo! Groups Links
> >
> >
> >
> >
> >
>
>
> Slackware user since 1994
>
>
>
> Yahoo! Groups Links
>
>
>

1336. Re: [AT_Sprint] Describe your ATS station?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-12 15:59:13 UTC
From: W2AGN
Topic: 1331 Message: 1336

Kurt Savegnago wrote:
> To add,
>
> I wonder if 12V ops would be reasonably safe with
> the availability of small lead, Nimh and 11.1V Li
> batteries with the new protection circuits planned.
>
> Kurt
> KC9LDH
> --- Tim <bipetype@...> wrote:
>
>> Hi Folks,
>>
>> Like many, I'm anxiously awaiting the release of the
>> -3B. I'm also
>> completely inexperienced at portable ops. I'd like
>> to hear what you
>> are using for your complete portable station - from
>> power
>> supply/batteries to antennas/feed lines and
>> everything in between.
>> That will help me get a feel for the "other stuff"
>> I'm going to need.
>>
>> Tnx es 72 de Tim KX3H

I posted a couple of pictures of my original ATS station set up, under album "W2AGN Kitchensink" For power I use either a ten-pack of 2500Mh Nicads, or a small 4AH SLA (which lasts for a LONG time!). I have become a believer in the end fed 1/2 wave, cut for 40M. It works super on 20M also. Simple antenna, winds up on a little spool. Actually the whole station could be carried in the pockets of one of those "sportsman's vests."

--

_ _ _ _ _
/ \ / \ / \ / \ / \ John L. Sielke
(W)(2)(A)(G)(N) http://w2agn.net
_/ _/ _/ _/ _/ http://www.blurty.com/users/w2agn
Member screwed by QRP-ARCI! http://w2agn.net/noarci.html

1337. Unassembled ATS-3A Kit

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-13 17:51:24 UTC
From: Jim Fraser
Topic: 1337 Message: 1337

Hi All,

In case anyone is interested, there is an unassembled ATS-3A kit currently on eBay. Just search "ATS-3A" and you will find the listing.

Jim K6JF

1338. Re: Describe your ATS station?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-13 20:23:43 UTC
From: Jim Fraser
Topic: 1331 Message: 1338

I have only begun to assemble the components for my future ATS-3B station. So far all I have completed is the BLT antenna tuner. I will be working on an N0SS CW Zero-Beat Indicator this weekend (actually two of them, one for my older big rig). I also plan to get another NEQRP SCAF Audio Filter soon. The plan is to combine the ATS-3B, SCAF and Zero-Beat Indicator in one package.

Jim K6JF

1339. Re: [AT_Sprint] Re: Describe your ATS station?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-13 21:02:24 UTC
From: Karl Larsen
Topic: 1331 Message: 1339

Jim Fraser wrote:
> I have only begun to assemble the components for my future ATS-3B
> station. So far all I have completed is the BLT antenna tuner. I will
> be working on an N0SS CW Zero-Beat Indicator this weekend (actually two
> of them, one for my older big rig). I also plan to get another NEQRP
> SCAF Audio Filter soon. The plan is to combine the ATS-3B, SCAF and
> Zero-Beat Indicator in one package.
>
I think what your doing is overkill. The ATS3 I have has a very
narrow receiver! To call a person on the right frequency is set by the
tone YOU set in setting up the radio. If you stay and tune stations to
that tone you will be on their frequency. Not a problem.

Karl K5DI

> Jim K6JF
>
>
>
>
> Yahoo! Groups Links
>
>
>
>
>
>
>

1340. Re: [AT_Sprint] Re: Describe your ATS station?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-13 21:58:23 UTC
From: Terry WAØITP
Topic: 1331 Message: 1340

ATS3, 1.2 or 3 or 7AH SLA whatevers's charged, BLT, AZ ScQRPion mini paddle, 50' EFZ, and Koss Plugs. I use a CD holder from Wally's, grab it and go.

I love this radio stuff!
72 73
Terry, WAØITP
http://www.wa0dx.org/wa0itp
http://www.wa0dx.org
http://www.4sqrp.com/

----- Original Message -----
From: Jim Fraser
To: AT_Sprint@yahoogroups.com
Sent: Friday, July 13, 2007 3:23 PM
Subject: [AT_Sprint] Re: Describe your ATS station?

I have only begun to assemble the components for my future ATS-3B station. So far all I have completed is the BLT antenna tuner. I will be working on an N0SS CW Zero-Beat Indicator this weekend (actually two of them, one for my older big rig). I also plan to get another NEQRP SCAF Audio Filter soon. The plan is to combine the ATS-3B, SCAF and Zero-Beat Indicator in one package.

Jim K6JF

No virus found in this incoming message.
Checked by AVG Free Edition.
Version: 7.5.476 / Virus Database: 269.10.4/898 - Release Date: 7/12/2007 4:08 PM

1341. RE: [AT_Sprint] Describe your ATS station?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-13 22:54:54 UTC
From: mstangelo@comcast.net
Topic: 1331 Message: 1341

Tim,

For portable operation I use the Emtech ZM-2 Z match:

<http://emtech.steadynet.com/zm2.shtml>

It's small, tunes parallel transmisssion line fed antennas as well as coaxial fed or wire antennas, and
most impotrantly, has a built-in SWR reflected power bridge using an LED for indication of your match condition. This is a resistive bridge, so the worst SWR the ATS will see while matching is 2:1. This helps in protecting your final transistors.

73,

Mike N2MS

From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com] On Behalf Of Tim
Sent: Thursday, July 12, 2007 9:25 AM
To: AT_Sprint@yahoogroups.com
Subject: [AT_Sprint] Describe your ATS station?

Hi Folks,

Like many, I'm anxiously awaiting the release of the -3B. I'm also
completely inexperienced at portable ops. I'd like to hear what you
are using for your complete portable station - from power
supply/batteries to antennas/feed lines and everything in between.
That will help me get a feel for the "other stuff" I'm going to need.

Tnx es 72 de Tim KX3H
-'---

1342. Re: [AT_Sprint] Re: Describe your ATS station?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-13 23:48:12 UTC
From: john
Topic: 1331 Message: 1342

>Jim Fraser wrote:
> > I have only begun to assemble the components for my future ATS-3B
> > station. So far all I have completed is the BLT antenna tuner. I will
> > be working on an N0SS CW Zero-Beat Indicator this weekend (actually two
> > of them, one for my older big rig). I also plan to get another NEQRP
> > SCAF Audio Filter soon. The plan is to combine the ATS-3B, SCAF and
> > Zero-Beat Indicator in one package.

Jim,

You're going to find the N0SS zero beat indicator very handy. I installed
one in my K2, and it's a wonderful addition. I'm fairly tone deaf, and it
really helps my return call rate, since my "wet filters" can't be depended on !

It's a small board and should fit anywhere. Regarding the SCAF, one can
never have too many filter options! :-)

Go for it!
John K5MO

John K5MO

1343. Re: Describe your ATS station?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-14 03:09:59 UTC
From: radio_kx0r
Topic: 1331 Message: 1343

Tim,

True portable operating is an activity that will evolve and change as you give it a chance. You try things and see what works and what doesn't. What works in a campground may not be so cool if you hike or backpack with your rig.

For campground camping at local Scout events, which are mostly winter campouts here, I take a QRP rig, a tuner (BLT or other), cables, earbud headphones, Palm paddles, small storage battery (lead, NiMH, or LiIon), a dipole cut to 70 feet, 50 feet of 300 ohm line, dacron lines, and a fishing pole with a cheap Zebco reel to put up the lines for the antenna. For trail use I take most of the same stuff, but a simpler antenna, often just end-fed with a counterpoise wire on the ground. This is a bunch of cut hookup wire on a spool.

I think it's important to understand that QRP portable is a real challenge to do well, and that it takes a lot of experimenting to figure out what works OK. You should plan on plenty of imperfect outings before you'll feel like things are going OK. Running CW in the field is about ten times harder than operating your home station.

Cold weather, snow, rain, insects, and wind can make setting up a station and operating very difficult. Lightning can kill you if you put an antenna up at the wrong time. Even a dipole can catch enough high voltage to jump through the soles of your shoes. Operating inside a tent can be very uncomfortable after a while. In really cold weather, you may have to wear gloves just to hold the paddles, plus a hat over your phones, and a headlamp as well. Ballpoint pens don't write when it's cold, and logging can be impossible without a pencil. Every antenna/feedline/tuner/rig/band combination should be tested before taking it out in the field, or you may find yourself off the air because you can't get a good match on the band you want to use.

The upside is that portable contacts can turn into great QSO's, and the experience is very magical. Your hard work and frustration will pay off, and you'll have amazing experiences in unusual settings.

The ATS3 series of rigs solve many of the problems of portable operation, because the designs reduce weight, size, power drain, and complexity. You still need an efficient antenna, and there are few really good instant answers.

There are plenty of experienced portable operators, so listen to what they write and say. I know I have a lot to learn about this part of our hobby.

72/73
KX0R

> Hi Folks,
>
> Like many, I'm anxiously awaiting the release of the -3B. I'm also
> completely inexperienced at portable ops. I'd like to hear what
you
> are using for your complete portable station - from power
> supply/batteries to antennas/feed lines and everything in between.
> That will help me get a feel for the "other stuff" I'm going to
need.
>
> Tnx es 72 de Tim KX3H
>

1344. July RFTB

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-14 21:15:49 UTC
From: Larry Makoski
Topic: 1344 Message: 1344

This Sunday evening the Flying Pigs Amateur Radio Club International will be holding its monthly Run For The Bacon. This is a friendly, two hour QRP CW Sprint, which is open to ALL radio amateurs, will last from 9:00 - 11:00PM EDT (0100-0300 UTC Monday).

You may work stations once per band on 160, 80, 40, 20, 15 or 10 Meters. Suggested starting frequencies are 1.812, 3.562, 7.044, 14.062, 21.062, and 28.062 MHz.

The exchange is RST, S/P/C (State, Province, Country) and Flying Pigs membership number. If you're not a member of the Flying Pigs, and would like to be; then please click on the "membership" hyperlink on .http://www.gentzow.com/fpqrp/ Otherwise, non-members can just use their output power figure.

You can report your score via the Autolog page which can be found at :
http://gentzow.com/fpqrp/autolog.asp
or you can mail your logs to the address given on the Autolog page. The deadline for logs is July 22nd at 2400 UTC.

Hope to catch you on the air Sunday evening!

72 es "oo"
Larry W2LJ FP#612

1345. RE: [AT_Sprint] Describe your ATS station?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-15 13:31:56 UTC
From: John Paul
Topic: 1331 Message: 1345

Like others I use more than one station and/or combination of gear to operate

QRP away from the house.

Over the years I have learned to try to use the same antennas that others brag

about for their particular use and find that some are good and some do not work

as well for me in some areas.

I operate from the beach areas on coastal NC and when I do I have found several

antennas can work and some just don't work. Since there is a lack of trees you have

to use pvc pipe supports in the sand, or sand spikes as they call them, when you set

up a vertical or two or more masts to hang an antenna. You can use dipoles or windoms

at the beach. The only problem is setting them up. It takes several people usually to

pull them out and set the guys for the end poles. Then you have to use longer spikes

to hold the ropes in place.

Verticals work better at the beach because of the ground plane and the salt water. But

you have to raise the bottom of the mast above the ground a few feet and let the radials

droop away from the antenna and spread them out. I have used as many as 64 radials

for an antenna and that was just overkill. I tried it though and the matching on the meter

was near perfect and according to the formula it came down to specs. I tried it and will

not do it again for the length of time it took to put it all out and get it set up. Not for a

quick operation that is. It is a cumbersome antenna to set up anyway. But an awesome

performer. We were there for a week and it was a great performer for the operation.

The minimum of 4 to 8 with 1 or 2 in each quadrant was sufficient to work well. Guying the

vertical is important and we were using 40 meter and 80 meter verticals (homebrew) and we

co-phased two 80 meter verticals for a better signal. Again, a lot of work to put up and you

have to measure out your sections and get the length right before you get in the sand. SAND is a killer

when you put together aluminum sections on the beach too. So be careful it will cause

some of the sections to seize up and they are hard to get apart. With the verticals at the

beach we were only using 180 mW the whole time too and trying to use hand ground

crystals with the Knightsmite to make a long distance contact. That was the main reason

for the large antenna system.

When you have wind you can use kites for supports for the wires and keep them very high.

Here you have to worry about static discharges and storms coming though. We kept some

up almost all night until the winds stopped in the middle of the night, which usually happens

when you are hot and heavy into contacts. Then you have to drag and kite and the antenna

Out of the surf. Not much fun.

Putting up beams is a plus but you need supports for the mast and that requires something

already deep in the sand. If you stay at a cottage you can find something usually. Small

masts and not much height but they work well.

Where we are in the central part of NC and into the mountains we are fortunate in that we

have pine trees and they group up to and over 100 feet so we just put a lot of wire in the

air.

When we go portable with a small bag, I will usually take the ATS3, a battery pack, either

9V batteries and the adapter, or AA batteries and the case I made for it. That gives me

close to 12V for a while. Batteries weigh a lot when you carry a bunch, so don't forget that.

If you are trying antennas I have several and use all of them in different locations.

Norcal doublet with an expandable 33 foot DK9SQ mast, and use it for 80, 40 and the other

bands well in most conditions.

A W3EDP roll out is another good performer and you just shoot it up in a tree and hook it up

to the tuner and lay out the ground wire. It does very well for short sprints.

I have been trying and getting a good NVIS antenna system set up for quick use. It is good

for 1000 miles or less and worked well for FD this year and we are working on it with different

specs in the club and we have found it performs very well on 80 40 and the other bands.

It is long, though, and needs a lot of space in four directions. It is very lightweight and we can

set it up in less that 20 minutes. Very functional for emergencies and a great performer.

Loops work well in both horizontal and vertical configurations. Height and space are a big

need for those, and we have several of these made up to use in different locations. They perform

very well and we have cut and added many times to get them right with 450 ohm ladder line.

They work and perform very well but are cumbersome to carry much of a distance. We use them

mostly for places where we just call drive up's. That is where we use the big ones.

Caroline Windoms (OCF) antennas are good performers but are weighty and cumbersome and only

for drive up locations.

Tuners include the ZM2, the LDG Z11, and the Rainbow Tuner. All three have their applications and

work well. I prefer the ZM2 by Emtech because you do not need power for it. For backpacking and

places where you do not want much weight it fits well in a small backpack.

The LDG Z-11 is an awesome performer and works well in auto or manual mode and tunes almost anything

I have put up from one end to the other in the bands. It also has a memory so that when you switch bands

it will remember the last time you tuned the antenna and quickly tune to that spot.

As for operating, I have my favorite combinations and keep them in a steno notepad and from my experiences

and different sprints and the like, I pick my combinations and keep them together in a jump bag for a quick

jaunt to the woods. You will have your own preferences after a while and your best combination of antenna/radio

groupings for different areas. You just have to try them all out and see what works best for you.

As for the earphones, I have noise cancelling padded phones down to earbuds. I have reconstructed earbuds with

Newer pads and used different foam types and found the best combinations there too. Depending on where

You are operating and how you operate.

As for logging I have a laptop and if I am doing a long contest I will use it with a logging program. If a short event

I have several log books and one is better than another. It is water resistant and you can use a special pen with it

too and it will not run the ink in the rain. Logging is important and you also need some sort of leg pad or holder.

I have one that I got in a military surplus store for pilots that has a light on it. It is aluminum and does not weigh

much at all. I also made a homebrew holder for the paddles to sit on one thigh while operating in a tent. A small

clip board is optional and comes in handy with homemade log sheets. Pencils write in the rain and waterproof pens

write in the rain, but operating in the rain is not a nice place to be anyway. Snow and rain usually happen a lot

so that is another thing to think about. A good poncho is a must for backpacking and keeping dry on the walk in

or out of a location.

If you go to a park or some other location a tarp is a must to keep the sun off you and the rain off if you stay

for a length of time. Then you need some small rope to tie it up. I carry a roll or two with lines already cut to

tie it up to a couple trees if they are around or I carry a bag of rods I got at the wal mart. Two make up a 6 foot pole

and 3 make up a 9 foot pole. They are also good to raise up the end of the Norcal doublet or the NVIS antenna

ends. They do not interfere with the antennas either.

As for the power supplies, I have several 12V gel cells and chargers for those. Depending on where I am

going to set up I can take one or more of those to use for power too.

A headlamp and a small lantern light are a must for evening hours and walking in and out of a location in the dark.

I have a headlamp that has red and white LED's and a regular light bulb. It uses 3AAA batteries and lasts a long

time on the LED lights and shorter on the regular bulb. I also have another LED (4 AA) that I carry in my pocket

for hanging in the tent in the middle for plenty of light. It has 7 LED bulbs and is very bright when it gets dark.

For operating on a table I use a small Exponent gas lantern that uses the same gas I use for my exponent gas

stove. I carry the stove with me for my coffee. I can carry water to make coffee or just use it for crystal light

powders to make up a drink too. As for the drinking, I use a camelback and mine holds 200 ounces. So it is

plenty of water to drink or to spray on my head when I get hot.

As for operating from a tent I found a nice light fold up seat that can double for a pillow. It fits nicely on the

back of my backpack and when I sit I have support for my back when operating. It is also good on a park

bench or picnic table. They are available at most of the camping supply outlets.

Hat, now that is a must along with a walking stick. Hat is one of several. The wife usually gives me a new

one every couple years and the newest one has mesh on the sides of the top and is very wide brimmed. It

keeps the sun off the neck and whatever falls from the trees off my neck as well. Mainly it keeps the sun

off the bald spot on the back of my head too. Hi hi

As for paddles (since I only operate CW) I have many there. I have several homebrews and a few I purchased.

My favorites are the palm paddles and the whiterook. Palm paddles can sit well on the leg rest and make

operating very comfortable.

Another plus is a light weight shirt, "Columbia" is the one I use, which has pockets galore and I can keep

odds and ends in the pockets. Matches, snacks, pencils, pens, etc. Also if you hike much you have to

learn about socks and boots. Learn before you go hiking though. Don't break in a pair on a hike. Bad

mistake there. Socks, pay for the better ones, and carry an extra pair so you can put on dry one's. Zip locks

are a must too to keep things dry, like underwear and socks. And paper and matches.

If you go hiking and camp too, Tents are plentiful and you need to find one that is lightweight and suits

your needs.

And don't forget the small shovel or the spade to dig the hole with and the paper for the hole. And use

the biodegradable type. I recommend you read a good book there, "How to Shit in the Woods" by a very nice lady'

Katheen Meyer, who did a lot of research on the subject. That is a must to save our environment if you hike much.

You will enjoy the stories too. It makes good reading when there is not much on the radio too. It even has

a chapter for the lady hikers. I recommend this highly.

As for carrying cases for the equipment alone, I have pelican cases for trips, that I can put a whole rig with

the antenna and batteries in. They are good for travel and go through customs well at the airport. As for

light travel I have several sandwich type zip up bags that keep the water out and the snow out. I like those

for their functionality. Again, zip lock bags are a must with gear when you expect bad weather.

As for the antennas, you have to pick the one you like and make up new ones. Try new wire sizes, and weights

and put them on an analyzer and see what you have. I have cut a lot of wire and ended up not using them

because they did not perform well. Usually though, if you put enough thought into what you are making,

Even zip cord, cut the the right lengths and strung up on my 33 foot mast at the right angles, as a norcal

doublet, works very well.

Oh, an a real must is a journal. Keep a journal of your events and what you used. Also remember the

propagation at the time. Some antennas do not work at all when the propagation is bad. But then again

the best one's do not work well then either. So next time you go it might be one of the best one's you

have in your arsenal.

Above all else, take someone with you. Take a non ham when you can and show him how much fun

It can be. The hiking alone can be the most fun you have on the trip. Whether in the mountains, or

on the beach. You might get lucky and see some logger head turtles on the beach laying eggs, or

you might meet someone on a long hike with some stories to share. You just never know what you

will learn from someone out there who has been doing it for a while.

As a side note, the ATS3 is very small, compact, and fits in a shirt pocket as well. I can put my

antenna, radio and paddles in my shirt pockets with some rope and a sinker and go to the woods

and operate. A small notepad for logging with a good mechanical pencil and you are set.

So, go have fun. Take notes and one day you will find the right combination that suits your and

your needs.

I hope this helps you some. If I can help further, let me know and I will see what I can relay to you.

JohnPaul/AB4PP

Raleigh, NC

"Sir Scribemeister of the Knightlites"

From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com] On Behalf Of Tim
Sent: Thursday, July 12, 2007 10:25 AM
To: AT_Sprint@yahoogroups.com
Subject: [AT_Sprint] Describe your ATS station?

Hi Folks,

Like many, I'm anxiously awaiting the release of the -3B. I'm also completely inexperienced at portable ops. I'd like to hear what you are using for your complete portable station - from power supply/batteries to antennas/feed lines and everything in between. That will help me get a feel for the "other stuff" I'm going to need.

Tnx es 72 de Tim KX3H

1346. Run for the Bacon, 7/15/2007, 6:00 pm

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-16 00:41:39 UTC
From: AT_Sprint@yahoogroups.com
Topic: 1346 Message: 1346

Reminder from: AT_Sprint Yahoo! Group
http://groups.yahoo.com/group/AT_Sprint/cal

Run for the Bacon
Sunday July 15, 2007
6:00 pm - 8:00 pm
(This event repeats every month on the third Sunday.)
Location: Your shack or anywhere

Notes:
This Sunday evening, the Flying Pigs Amateur Radio Club International will be holding its monthly Run For The Bacon. This is a friendly, two hour QRP CW Sprint, which is open to ALL radio amateurs, will last from 9:00 - 11:00PM EDT (0200-0400 UTC Monday).

You may work stations once per band on 160, 80, 40, 20, 15 or 10 Meters. Suggested starting frequencies are 1.812, 3.562, 7.044, 14.062, 21.062, and 28.062 MHz.

The exchange is RST, S/P/C (State, Province, Country) and Flying Pigs membership number. If you're not a member of the Flying Pigs, and would like to be; then please cli

All Rights Reserved
Copyright ? 2007
Yahoo! Inc.
http://www.yahoo.com

Privacy Policy:
http://privacy.yahoo.com/privacy/us

Terms of Service:
http://docs.yahoo.com/info/terms/

1347. July NAQCC Sprint & giveaway

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-17 01:48:34 UTC
From: Larry Makoski
Topic: 1347 Message: 1347

This Wednesday evening, the North American QRP CW Club will be holding its monthly sprint.

Here are the particulars:

Date and time:
Thursday, July 19th, 0030-0230 UTC
(Remember that's Wednesday evening here in the USA) That's 8:30 - 10:30 EDT, 7:30 - 9:30 CDT, 6:30 - 8:30 MDT and 5:30 - 7:30 PDT.

Bands - Frequencies:
80M - 3555-3565 kHz (Be courteous to FISTS operating on 3558 kHz)
40M - 7039-7050 kHz (Avoid W1AW on 7047.5 kHz).
20M - 14059-14065 kHz. General:
A particular station may be worked once on each band. Operate CW only. All licensed amateurs are invited to participate, but only those operating QRP (5 watts or less) are eligible for awards.

Call: CQ NA

Exchange:
RST - SPC (State Province or Country) - NAQCC Nr.
(non-Members substitute power level for NAQCC Nr., e.g. 5W, 1W, etc. Be sure to add the W.)

QSO Points:
QSO with a Member, 2 points.
QSO with a Non-member, 1 point.

Multipliers:
Each USA state
Each VE province
Each country except W/VE
All multipliers count only once in the contest.

Bonus:
If you use only a straight key for the entire sprint, multiply your score by 2.
If you use only a bug for the entire sprint, multiply your score by 1.5.
If you key with anything other than a straight key or bug, there is no bonus multiplier.

Categories:
SWA - simple wire antennas - for those using a simple wire antenna per NAQCC definition.
GAIN - gain antennas - for those using other than a simple wire antenna.

Special Award:
Our special award this month goes to the one with the highest score working the most different call areas in the USA. It's the state that determines the call area, not the call sign number. For example working a W6 in Florida counts for the 4th call area, not the 6th.

The winner will win a set of CD's features K7QO, Chuck Adams' code course designed to increase code speed. Please see:
http://www.arm-tek.net/%7Eyoel//sprint200707.html for further details.

REMEMBER: You HAVE to be a NAQCC member to be eligible to win the CDs; and there's still plenty of time to join before Wednesday night's sprint. To join the NAQCC, please visit:
http://www.arm-tek.net/~yoel//joinup.html

Entry Deadline:
All entries must be RECEIVED before 2400Z on July 25th 2007. So submit as soon as possible, especially regular mail entries.

For further information, please visit:
http://www.arm-tek.net/~yoel//sprintrules.html

73 de Larry W2LJ
NAQCC #35

1348. Re: [AT_Sprint] Describe your ATS station?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-17 22:33:02 UTC
From: w9ya@qrparci.net
Topic: 1331 Message: 1348

Hey gang;

I have seen Mark B.'s VERY small station setup. Mark's dry explanation (below) does not do it credit as it is really well done. And it gave me some ideas to try out that I have since incorporated.

Vy 72;

Bob
w9ya

>
> --- Tim <bipetype@...> wrote:
>
>> I'd like to hear what you are using for your complete
>> portable station -
>
> ATS3
> Elecraft T1 Tuner
> 8' RG-316 jumper with pigtails (T1 to ant)
> 2' RG-316 jumper (XCVR to T1)
> 26ga silver teflon wire, 24, 36 and 48 ft pieces.
> 6ea AA cell holder
> Palm Key paddle
> Earbuds
>
> Fits in a small zippered shaving case.
>
> Have taken this on several airline trips in carry-on luggage,
> no problems with security. An appropriate length of antenna wire
> is chosen for the proposed installation, and tossed/tied/strung
> in place as a vertical, doublet, inverted L, V, etc. Turn on the T1,
> hit the key, wait for the green light and I'm off and running.
>
> A 6AA pack was chosen due to the ubiquitous nature of AA cell
> availability pretty much anywhere in the world, so I don't
> mess with rechargeables. Alkalines provide a decent run time,
> and the ATS puts out about 2W at that input voltage with little
> risk of damaging finals due to SWR (until the tuner tunes).
> In a pinch I can disconnect the AA pack which has a 9V battery
> style connection and use the 9V battery out of the T1 (once it
> has tuned) and get a couple hours' operating out of that.
>
>
>
> Mark K5LXP

> Albuquerque, NM

1349. Sleeping Pad Paddle

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-25 00:50:18 UTC
From: Ken Lotts
Topic: 1349 Message: 1349

Hi

I just uploaded some photos of an experimental project I had been working on this weekend..

I had this idea to try out a touch paddle circuit integrated into the ATS3 via a cut up section of sleeping pad foam. This was motivated from an effort to shed weight and retain ruggedness and performance. The radio with integrated paddles weighs less than 3 oz. Paddle performance is excellent and they are very rugged. I cant send worth beans using the ATS3 keyer but that doesn't count ;)

Shown in the photos is another one of my experiments that turned into a 6.5 oz QRP tuner. Way too heavy for being in the same league as the ATS3 but it is small and rugged and has very good performance. It has two plastic 532pf variable capacitors in a T tuner arrangement with approx 16uH. It is easy to use with the built in LED resistive bridge.

I installed the firmware offered by W1MT into my ATS3 and really like it a LOT. The new firmware adds a bunch of pretty cool little features. I really like the 10 Hz tuning rate option plus the scan feature provides a useful way to scoot around (without wearing out the miniature push buttons). I also like the A/B vfo selection capability. I personalized the menu in the firmware so as to eliminate the memory keyer function that I never use.

I added the "ultimate filter mod" and it was very worth while on my older ATS3.. I think I damaged something at some point because my sensitivity has gone down especially on 30 & 20 mtrs. I need to debug that. 40 meters (my main band) still works pretty well

Ken Lotts
aa7jc

1350. Re: [AT_Sprint] Sleeping Pad Paddle

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-25 09:26:27 UTC
From: Vojtěch Bubník
Topic: 1349 Message: 1350

Hi Ken.

That is cool! Gues what. I am currently working on integrating the touch keyer inside my ATS rig too.

> I really like the 10 Hz tuning rate option plus the scan feature provides a
> useful way to scoot around (without wearing out the miniature push buttons).

I thought of connecting the two touch paddles to tune up/down buttons and using the Mike's firmware (or copy it into my version of firmware), that enables up/down buttons to be used as a paddle. This way one would get easy tuning for free.

I bought the QT-117 chips from Farnell. They are cheaper there than from touchkeyer.com. Only difference is that touchkeyer.com uses variant with positive logic output, but the chip from Farnell uses negative logic. Negative output is even better for ATS-3, because I may spare the two 2N7000 FETs.

It is stated in the QT-117 datasheet, that the stray capacity of the electrodes decreases sensitivity. I thought about putting a piece of PCB flat on the upper side of the tin and tap on it. I wonder whether the stray capacitance of the electrode to the tin would be too high for the circuit to work.

73, Vojtech OK1IAK

1351. RE: [AT_Sprint] Sleeping Pad Paddle

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-25 12:49:00 UTC
From: Ken Lotts
Topic: 1349 Message: 1351

Vojtech,

Thanks for the info on the QT-117, yes the touchkeyer circuit was a wee bit pricey for what it was. I can report that the stray capacitance of the electrode wires to the tin is not causing any noticable problems in my experimental touchkeyer setup plus since the paddles are side swipers so they are very natural to use. I have a hard enough time sending code with the ATS3 that I did not want to add another variable into the mix by trying a tapper arrangement. Perhaps there is a parameter or routine in the firmware that I can tweak somewhere to make it behave more like my other keyers.

Ken Lotts
aa7jc

-----Original Message-----
From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com]On Behalf Of Vojtich Bubnik
Sent: Wednesday, July 25, 2007 2:26 AM
To: AT_Sprint@yahoogroups.com
Subject: Re: [AT_Sprint] Sleeping Pad Paddle

Hi Ken.

That is cool! Gues what. I am currently working on integrating the touch keyer inside my ATS rig too.

> I really like the 10 Hz tuning rate option plus the scan feature provides a
> useful way to scoot around (without wearing out the miniature push buttons).

I thought of connecting the two touch paddles to tune up/down buttons and using the Mike's firmware (or copy it into my version of firmware), that enables up/down buttons to be used as a paddle. This way one would get easy tuning for free.

I bought the QT-117 chips from Farnell. They are cheaper there than from touchkeyer.com. Only difference is that touchkeyer.com uses variant with positive logic output, but the chip from Farnell uses negative logic. Negative output is even better for ATS-3, because I may spare the two 2N7000 FETs.

It is stated in the QT-117 datasheet, that the stray capacity of the electrodes decreases sensitivity. I thought about putting a piece of PCB flat on the upper side of the tin and tap on it. I wonder whether the stray capacitance of the electrode to the tin would be too high for the circuit to

work.

73, Vojtech OK1IAK

1352. Re: [AT_Sprint] Sleeping Pad Paddle

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-25 13:35:19 UTC
From: Jim Miller
Topic: 1349 Message: 1352

i went to the qprox website and couldn't find any info on the qt117.

where did you find info?

73

jim ab3cv

1353. Re: [AT_Sprint] Sleeping Pad Paddle

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-25 13:53:46 UTC
From: Vojtěch Bubník
Topic: 1349 Message: 1353

Hi Jim.

Sorry, I made an error. I think the part is qt113.
I will look once more at the chips at home.
qt113 is the fastest of its family, 30ms detection delay.

73, Vojtech OK1IAK

> ------------ Původní zpráva ------------
> Od: Jim Miller <jim@...>
> Předmět: Re: [AT_Sprint] Sleeping Pad Paddle
> Datum: 25.7.2007 15:38:45
> --
> i went to the qprox website and couldn't find any info on the qt117.
>
> where did you find info?
>
> 73
>
> jim ab3cv
>
>
>
>
> Yahoo! Groups Links
>
>
>
>
>
>
>

1354. RE: [AT_Sprint] Sleeping Pad Paddle

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-25 20:04:18 UTC
From: Michael Harnage
Topic: 1349 Message: 1354

There are two modes in the ATS firmware: iambic A and
iambic B. I believe that iambic A is the default.
Perhaps your other keyers are iambic B?

-mike/w1mt

--- Ken Lotts <ken@...> wrote:

> I have a hard enough
> time sending code with
> the ATS3 that I did not want to add another variable
> into the mix by trying
> a tapper arrangement. Perhaps there is a parameter
> or routine in the
> firmware that I can tweak somewhere to make it
> behave more like my other
> keyers.
>

_____
Pinpoint customers who are looking for what you sell.
http://searchmarketing.yahoo.com/

1355. RE: [AT_Sprint] Sleeping Pad Paddle

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-25 21:14:20 UTC
From: ken
Topic: 1349 Message: 1355

Hi Mike,
Thanks for the great firmware mods with all the easy to read remarks!

I normally pick Iambic mode B but on the ATS3, both A & B throw my fist for a loop. Very odd in as much that it is the only keyer that I have run into a problem with. I am trying to get through this via practicing into a dummy load. Practice never hurts... Still, I cant help but wonder about kind of tweak would make the difference.

Ken Lotts
aa7jc

_____
From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com] On Behalf Of Michael Harnage
Sent: Wednesday, July 25, 2007 1:04 PM
To: AT_Sprint@yahoogroups.com
Subject: RE: [AT_Sprint] Sleeping Pad Paddle

There are two modes in the ATS firmware: iambic A and
iambic B. I believe that iambic A is the default.
Perhaps your other keyers are iambic B?

-mike/w1mt

1356. BEE # 0018

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-29 15:45:02 UTC
From: John Paul
Topic: 1356 Message: 1356

I am leaving to go walk out to Durant Nature Park in North Raleigh.

I will be set up using my NVIS antenna.

See you all in the contest.

JohnPaul/AB4PP

Raleigh, NC

1357. ATS3 Firmware

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-30 18:30:06 UTC
From: Matt
Topic: 1357 Message: 1357

Is the source code for the firmware used in the 430 on the ATS3 available? I really would like to look at what was done, I'm fairly new to these processors and it would be nice to look at something like this as a starting point for home brew projects. If anyone can help i would appreciate it.

Matt
KD8DAO
KD8DAO@...
(i don't check my yahoo mail)

1358. Re: [AT_Sprint] ATS3 Firmware

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-30 21:32:38 UTC
From: Michael Harnage
Topic: 1357 Message: 1358

Google "ats firmware"

73 de w1mt
mike

--- Matt <ender84567@...> wrote:

> Is the source code for the firmware used in the 430
> on the ATS3
> available?

_____
Park yourself in front of a world of choices in alternative vehicles. Visit the Yahoo! Auto Green Center.
http://autos.yahoo.com/green_center/

1359. Re: [AT_Sprint] ATS3 Firmware

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-30 21:54:05 UTC
From: Steven Weber
Topic: 1357 Message: 1359

>Is the source code for the firmware used in the 430 on the ATS3
>available? I really would like to look at what was done, I'm fairly
>new to these processors and it would be nice to look at something like
>this as a starting point for home brew projects. If anyone can help i
>would appreciate it.

The source code is available on Mike, W1MT, web site,
<http://w1mt.qrpradio.com> Mike is the unofficial "keeper of the code" for
the ATS rigs. He also has info on reprogramming the processor.

1360. Re: ATS3 Firmware

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-31 13:13:22 UTC
From: Matt
Topic: 1357 Message: 1360

Funny Thing is I did that before I asked and all the hits I got were
"sprint ats" now I try it and it works... skynet is acting strange today.

--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:
>
> Google "ats firmware"
>
> 73 de w1mt
> mike
>
> --- Matt <ender84567@...> wrote:
>
> > Is the source code for the firmware used in the 430
> > on the ATS3
> > available?
>
>
>

> Park yourself in front of a world of choices in alternative
vehicles. Visit the Yahoo! Auto Green Center.
> http://autos.yahoo.com/green_center/
>

1361. Re: [AT_Sprint] Re: ATS3 Firmware

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-31 15:07:08 UTC
From: Michael Harnage
Topic: 1357 Message: 1361

Matt,

The net can be funny sometimes. If you have any
questions about the firmware or the rigs itself ask
them on the list here. Lots of smart guys here can
help. Welcome aboard.

-mike/w1mt

--- Matt <ender84567@...> wrote:

> Funny Thing is I did that before I asked and all the
> hits I got were
> "sprint ats" now I try it and it works... skynet is
> acting strange today.
>

Shape Yahoo! in your own image. Join our Network Research Panel today!
http://surveylink.yahoo.com/gmrs/yahoo_panel_invite.asp?a=7

1362. Re: ATS3 Firmware

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-31 15:13:08 UTC
From: Hank Greeb
Topic: 1357 Message: 1362

Yeah, at at least one do-do :)

72 de n8xx Hg
Do Do #1

Michael Harnage wrote:
>
> Matt,
>
> The net can be funny sometimes. If you have any
> questions about the firmware or the rigs itself ask
> them on the list here. Lots of smart guys here can
> help. Welcome aboard.
>
> -mike/w1mt
>
> --- Matt <ender84567@... <mailto:ender84567%40yahoo.com>> wrote:
>
> > Funny Thing is I did that before I asked and all the hits I got
> were "sprint ats"
> > now I try it and it works... skynet isacting strange today.
> >
>

1363. Re: Describe your ATS station?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-07-31 20:51:20 UTC
From: Jim Fraser
Topic: 1331 Message: 1363

OK, not having owned or used an ATS I was not familiar with the receiver characteristics. I will hold off on the SCAF. But with my ageing ears I think I will stick with adding the zero beat indicator for a visual indication. I might also add a small touch keyer paddle board I recently found so I would not have to lug around a key or my bencher paddle.

Noticed that Steve re-desiged his web site. There is an announcement that the ATS-3B will be available in early September at a cost of $190. I had expected the price to be near the $200 level.

Jim K6JF

1364. Special milliWatt RFTB.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-05 00:46:32 UTC
From: Larry Makoski
Topic: 1364 Message: 1364

Are you chained to your "QRP KiloWatt"? Have you ever wanted to try milliWatting but were afraid that it might be too hard, or perhaps too frustrating; or just plain futile? This Sunday evening the Flying Pigs Amateur Radio Club International will be holding a special milliWatt Run For The Bacon! This is your chance to see just exactly what less than a Watt can do! This challenging, and perhaps eye opening, two hour QRP CW Sprint, which is open to ALL radio amateurs, will last from 9:00 - 11:00PM EDT (0100-0300 UTC Monday).

It will work EXACTLY like a normal RFTB with one important exception - you MUST run less that 1 Watt of power!

You may work stations once per band on 160, 80, 40, 20, 15 or 10 Meters. Suggested starting frequencies are 1.812, 3.562, 7.044, 14.062, 21.062, and 28.062 MHz.

The exchange is RST, S/P/C (State, Province, Country) and Flying Pigs membership number. If you're not a member of the Flying Pigs, and would like to be; then please click on the "membership" hyperlink on .http://www.gentzow.com/fpqrp/ Otherwise, non-members can just use their output power figure.

You can report your score via the Autolog page which can be found at : http://gentzow.com/fpqrp/autolog.asp
or you can mail your logs to the address given on the Autolog page. The deadline for logs is August 12th at 2400 UTC.

Hope to catch you on the air Sunday evening - who will be named the "Top Piglet of the Sty"?

--
73 de Larry W2LJ
QRP - When you care to send the very least!

http://www.w2lj.qrpradio.com
http://w2lj.blogspot.com/

1365. touchkeyer for ATS3

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-05 18:31:23 UTC
From: Vojtěch Bubník
Topic: 1365 Message: 1365

Hi gang.

I built a touch keyer inside my ATS-3a. The keyer works very well and makes the transceiver even more compact than it was. I uploaded pictures to group photos, see album ok1iak.

I once built capacitive paddles using cmos logic chips. It worked well on breadboard, but after I designed a nice SMD PCB for it, the circuit did not work. I suppose the problem was in slightly different chip properties. After some tinkering I gave up on that kind of design.

Then I found about Quantum Research, namely QT113 chip.
http://www.qprox.com/downloads/datasheets/qt113_105.pdf
I ordered two of them from Farnell, one for dash, one for dot. DIL8 are for £2.18, SOIC8 for £1.84. Digikey has both packages for $3.50. Those chips waited for the project more than a year in my drawer.

The chips are apparently the same that www.cwtouchkeyer.com keyers use. The guy is selling a kit for $20 and he must have hard time scratching labels from every chip he sells. The chips come in two kinds. The -L is negative logic output, -H is positive logic output. The cwtouchkeyer.com chips are positive logic and outputs are inverted by 2N7000 fets. For my ATS-3a I used the negative logic chips, which are easier to get hold of and do not need the FETs.

The schematic I used is very much the same as from the datasheet, page 2, figure 1-1.
http://www.qprox.com/downloads/datasheets/qt113_105.pdf

I used Rseries=100kOhm, Cs=10nF, Vcc 3.3V. I configured the chip to low sensitivity, continuous output, infinite duration by setting Opt1=Vss, Opt2=Vdd, Gain=Vss. I added a separate 3.3V stabilizer on the board although the two chips may be sourced from the stabilizer on the ATS-3 board. I connected QT113 outputs to the microcontroller inputs by serial resistors 5k6. I built the circuit with two QT113 SOIC8 chips and stabilizer on a small piece of prefo board, see the album.

There is one feature of the QT113 chips called HartBeat(tm). With every measuring cycle, the output is set to 3rd state for 0.3ms. Those bursts are smoothed out by the debounce capacitors in ATS3. In the www.cwtouchkeyer.com circuits the bursts are smoothed out by the gate capacity of 2N7000.

It is important to keep elecrode capacitance to the ground at minimum. Putting copper clad pcb piece directly on the Altoids tin does not work, the rate of finger capacitance over idle capacitance is too low. It is possible to make the circuit more sensitive by increasing Cs, decreasing Rseries or reconfiguring the chip, but I rather increased the distance of electrodes from the tin. An old celluloid ruler is a perfect material for this purpose. If the transceiver is built inside a non-metal enclosure, it would be possible to glue the electrodes directly on the enclosure.

I did not connect touch paddle outputs to ATS-3 paddle input. I rather connected them parallel to the up/down switches. I find the tuning much more comfortable now. The electrodes are easy to find without looking, tuning around is smooth. W1MT implemented a feature in his firmware, which enables using ATS buttons as paddle. One toggles between the normal/paddle mode by double clicking the RIT button. I copied this part of code into my digital modes firmware, thanks Mike.

73, Vojtech OK1IAK

1366. digital modes firmware published

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-05 20:43:55 UTC
From: Vojtěch Bubník
Topic: 1366 Message: 1366

Hi gang.

I published my digital modes firmware for ATS-3a at http://pocketdigi.sourceforge.net
The release information follows.

73, Vojtech OK1IAK

Digital modes firmware for ATS-3a

The code is derived from Steve's work
atsprint 3A dds
80/40/30/20 CW rig
written by Steven Weber, KD1JV
copywrite 6/6/06 all rights reserved

Extended by Vojtech Bubnik OK1IAK to enable modulation of HAM shortwave modes.

ATS-3a is a tiny DDS controlled transceiver designed by
Steven Weber KD1JV, which fits into Altoids tin.
http://kd1jv.qrpradio.com/

Current firmware supports PSK31, PSK63, RTTY, MFSK16,
Olivia, Contestia and RTTYM modes, if used together with
pocketdigi software. There are binaries of PocketDigi for
desktop Windows, Pocket PC and Handheld PC devices. No
hardware modification of ATS-3a is necessary, but an
external interface is needed. For details see the technical
description links.

The microcontroller in ATS-3a is quite full already. To fit
digital modes modulator into 4k of flash rom, I had to
disable following features of the original code:

- Calibration. It is needed only once in the lifetime of
the TRX.
- Direct Frequency Input. Nice feature, but needed too much
flash space.
- Wideband reception is not hardware implemented in ATS-3a.
- Tuning mode
- Iambic B mode.

Additionally, I added keying by buttons from Mike Harnage
W1MT's firmware. The feature is enabled/disabled by double
tapping RIT button. Up/Down buttons change to Dit/Dah.

Technical description:
http://www.kufr.cz/~ok1iak/temp/PSK-with%20ATS3A-success-on-the-air.html
http://www.kufr.cz/~ok1iak/temp/bpsk31-ats3-proof-of-concept.htm

Description in Czech language:
http://www.kufr.cz/~ok1iak/HAM/digimodes/index.php3

1367. Code Warrior Junior

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-06 00:56:05 UTC
From: John Paul
Topic: 1367 Message: 1367

Has anyone else used one and broken one of the paddles?

I did during the BB last weekend. I was wondering if anyone had

An alternative to buying another set from vibroplex. I found their

Replacements on their website; but, I would like to see what other

Alternatives you guys have come up with.

JohnPaul/AB4PP

Raleigh, NC

jpkeon@...

1368. Re: Sleeping Pad Paddle

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-06 06:52:59 UTC
From: Vojtech Bubnik
Topic: 1349 Message: 1368

Hi Ken.

I wonder whether your keying troubles are touch paddle specific or general to ATS3. If you are having troubles with touch paddles, it may be caused by the HeartBeat feature of the QT113 chips. Look at the datasheet, page 5.
http://www.qprox.com/downloads/datasheets/qt113_105.pdf

You may test it quite easily. Reconnect one paddle to the tuning switch. If that paddle tunes faster than the switch, you are experiencing HartBeat bursts. If this is true, than I would recommend either to increase debouncing capacitors in ATS3, or adding 100pF capacitor between source and gate of 2N7000's on the touch paddle board.

I connected QT113 output to the MSP microcontroller input by a 5k6 resistor and a shottky diode. I wanted, that no current flows, if the touch paddle is open, but the microswitch is closed. It worked, but the low level of the touch keyer was raised by 0.2V of the shottky diode and debouncing caps of ATS3 were not effective to filter the HeartBeat strobes. I experienced "very fast tuning". After I removed the diodes, it works now.

73, Vojtech OK1IAK

1369. digital,modes,firmware,publishe

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-06 16:07:43 UTC
From: Steven Weber
Topic: 1366 Message: 1369

>I published my digital modes firmware for ATS-3a at
http://pocketdigi.sourceforge.net

FB Vojtech,

I was going to ask you for a copy of your work. I bought a hp iPQA hx 2495 last week and installed your pocketdigi program. Neat program and seems to work fine.

The 3B uses the processor with 8K memory, so there should be room to put the digimodes in there without losing any other features. And since we now also have the A/D converter available, it should be possable to use that to do the tone modem decoding, so a seperate FSK tone decoder chip won't be needed.

With any luck, I hope to be able to intergrate your digimode firmware into the -3B before they start to ship, so it will be digial ready from the get go. At least I'll try.

Steve kd1jv
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

1370. Re: digital,modes,firmware,publishe

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-06 17:05:47 UTC
From: billg5x
Topic: 1366 Message: 1370

I for one am very eager to play with this thing.
One thing in life I might hold my breath for.

Go Steve!

Bill, ni5x.

> With any luck, I hope to be able to intergrate your digimode
firmware into
> the -3B before they start to ship, so it will be digial ready from
the get
> go. At least I'll try.
>
> Steve kd1jv
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com
>

1371. Re: [AT_Sprint] Re: digital,modes,firmware,publishe

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-06 17:28:53 UTC
From: W2AGN
Topic: 1366 Message: 1371

billg5x wrote:
> I for one am very eager to play with this thing.
> One thing in life I might hold my breath for.
>
> Go Steve!
>
> Bill, ni5x.
>
>> With any luck, I hope to be able to intergrate your digimode
> firmware into
>> the -3B before they start to ship, so it will be digial ready from
> the get
>> go. At least I'll try.
>>
>> Steve kd1jv
>> 72,
>> Steve, KD1JV
>> "Melt Solder"
>> White Mountains of New Hampshire
>> http://kd1jv.qrpradio.com
>>
>

Wow! Wouldn't that be something, an 80-15M QRP CW/PSK/RTTY,etc transceiver in an Altoids tin! Absolutely boggles!

--
John - W2AGN

1372. Re: [AT_Sprint] digital,modes,firmware,publishe

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-06 18:38:05 UTC
From: Vojtěch Bubník
Topic: 1366 Message: 1372

Hi Steve.

> With any luck, I hope to be able to intergrate your digimode firmware into
> the -3B before they start to ship, so it will be digial ready from the get
> go.

That's the greatest news since I was told I will be father soon. That is another project of me for the near future.

> At least I'll try.

I hope it will not be difficult. I am not using any special feature of the microcontroller. Please do not hesitate to ask. I am certainly willing to throw some more time into the project, if it comes into 3b.

There is one feature I did not have time to implement yet and the MCU was full anyway. I thought of using watchdog to kill digital TX if someting goes wrong. Currently if you unplug the sound card output during TX, transceiver will be keyed down indefinitely.

> And since we now also have the A/D converter available, it should be possable to use that to
> do the tone modem decoding, so a seperate FSK tone decoder chip won't be needed.

It is a great idea to use the A/D converter for the modulation. The thing is that the sound output amplitude is too low to trigger any MCU digital input directly. The audio signal would need some amplification.

Currently the modulation speed is 1200Bd, tones 1200Hz and 2200Hz, which is the BELL202 norm. It is possible to deviate from the norm, if it makes the firmware simpler. For example if one makes the second tone 2400Hz, which is 2x the lower tone, the firmware timing will be simpler. There will be one or two signum changes per bit, which shall be easy to detect. But the modulation will be very similar to Manchester then, only conveying half of the information that Manchester does for the same bandwidth. The double symbol speed of Manchester is currently not needed though.

There is one reason to stay with two tones instead of converting to Manchester. The 1200/2400 FSK modulation shall be oblivious to nonsymetric signal.

I was thinking of throwing away the FSK decoder and replacing it with a simple OpAmp slicer. I was planning to do it this weekend actually. Do you plan to start with the external BELL202 decoder, or will you do it with the A/D from scratch? If you want to start with the external decoder, then it may help you, if I debug the simplified interface this weekend.

73, Vojtech OK1IAK

1373. in other -3B news..

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-06 19:50:15 UTC
From: Steven Weber
Topic: 1373 Message: 1373

I phoned in a big parts order to Mouser today, seeing they seem to have been losing my email orders. Almost everything was in stock, just a couple of things were not complete, but they had enough on hand to get started, and the balance of what is missing have reasonable lead times. Just need to get a few more odds and ends and will be ready for when the boards arrive at the end of the month.

Been working on the instruction/assembly manual. I should have it far enough along in a few days to put a preliminary copy in the files section of the group. That will give you all something to look over and suggest changes to.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

1374. ats3b digimodes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-06 19:37:55 UTC
From: Steven Weber
Topic: 1366 Message: 1374

At 08:38 PM 8/6/2007 +0200, you wrote:
>Hi Steve.
>
>That's the greatest news since I was told I will be father soon. That is
another project of me for the near future.
>
Congradulations and good luck with that!

>
>I hope it will not be difficult. I am not using any special feature of the
microcontroller. Please do not hesitate to ask. I am certainly willing to
throw some more time into the project, if it comes into 3b.
>

I'll let you know if I run into trouble!

>There is one feature I did not have time to implement yet and the MCU was
full anyway. I thought of using watchdog to kill digital TX if someting
goes wrong. Currently if you unplug the sound card output during TX,
transceiver will be keyed down indefinitely.
>

Might be a little hard to tell something went wrong until its too late.
Some kind of Tx time out might be good to include, though hard to tell if
thier just long winded or not.

>> And since we now also have the A/D converter available, it should be
possable to use that to
>> do the tone modem decoding, so a seperate FSK tone decoder chip won't be
needed.
>
>It is a great idea to use the A/D converter for the modulation. The thing
is that the sound output amplitude is too low to trigger any MCU digital
input directly. The audio signal would need some amplification.
>
>Currently the modulation speed is 1200Bd, tones 1200Hz and 2200Hz, which
is the BELL202 norm.

TI has an example program for implementing a two tone modem, not sure if
its 202 compliant or not. I'm hoping to use that with little or no
modification. (Since I don't quite understand what thier doing, I hope its
no modification, hi)

I might build a little tone detector circuit to start out with, we'll see
how the software approch turns out first. I figure on cap coupling to the
resistor divider used for battery voltage measurement to input the tone to
the A/D. Since I've used up all the ports (again!) and the boards are

already on order, that's the simplest way of inputing the tone.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

1375. Re: [AT_Sprint] in other -3B news..

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-06 20:13:16 UTC
From: Kurt Savegnago
Topic: 1373 Message: 1375

Hey,

Just make sure you lay in a big enough supply to
handle the demand, will ya? :-) I want to get one.

Kurt Savegnago

--- Steven Weber <kd1jv@...> wrote:

> I phoned in a big parts order to Mouser today,
> seeing they seem to have
> been losing my email orders. Almost everything was
> in stock, just a couple
> of things were not complete, but they had enough on
> hand to get started,
> and the balance of what is missing have reasonable
> lead times. Just need
> to get a few more odds and ends and will be ready
> for when the boards
> arrive at the end of the month.
(Snip for brevity's sake)

Slackware user since 1994

1376. RE: [AT_Sprint] in other -3B news..

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-06 20:51:26 UTC
From: jwsteven@concentric.net
Topic: 1373 Message: 1376

Hi Steve,

I know you're not quite ready to take orders yet, but if it helps for planning, I will be ordering one as soon as you release it.

Thanks for the great little rigs!!

73 john k5js

---

mail2web.com ☐ Enhanced email for the mobile individual based on Microsoft® Exchange - http://link.mail2web.com/Personal/EnhancedEmail

1377. Re: [AT_Sprint] in other -3B news..

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-06 21:08:41 UTC
From: Karl Larsen
Topic: 1373 Message: 1377

Steven Weber wrote:
> I phoned in a big parts order to Mouser today, seeing they seem to have
> been losing my email orders. Almost everything was in stock, just a couple
> of things were not complete, but they had enough on hand to get started,
> and the balance of what is missing have reasonable lead times. Just need
> to get a few more odds and ends and will be ready for when the boards
> arrive at the end of the month.
>
> Been working on the instruction/assembly manual. I should have it far
> enough along in a few days to put a preliminary copy in the files section
> of the group. That will give you all something to look over and suggest
> changes to.
>
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com
>
>
>
> Yahoo! Groups Links
>
>
>
>
>
>

Hi Steve, I will look for that manual and be sure to offer changes. Of course your the last word so no worry on my part. What is going on today is exciting.

--

Karl F. Larsen, AKA K5DI
Linux User
#450462 http://counter.li.org.

1378. Re: [AT_Sprint] in other -3B news..

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-06 22:18:16 UTC
From: john
Topic: 1373 Message: 1378

Can't wait, Steve... but I will!

John K5MO

At 03:50 PM 8/6/2007, you wrote:
>I phoned in a big parts order to Mouser today, seeing they seem to have
>been losing my email orders. Almost everything was in stock, just a couple
>of things were not complete, but they had enough on hand to get started,
>and the balance of what is missing have reasonable lead times. Just need
>to get a few more odds and ends and will be ready for when the boards
>arrive at the end of the month.
>
>Been working on the instruction/assembly manual. I should have it far
>enough along in a few days to put a preliminary copy in the files section
>of the group. That will give you all something to look over and suggest
>changes to.
>
>72,
>Steve, KD1JV
>"Melt Solder"
>White Mountains of New Hampshire
>http://kd1jv.qrpradio.com
>
>
>
>Yahoo! Groups Links
>
>
>

1379. ATS-3B Wife's Anniversary Present for Me!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-07 00:22:54 UTC
From: j_wasciuk
Topic: 1379 Message: 1379

Steve!

She says I can order it as a Wedding Anniversary Present for myself
this year! Set one aside for me!

73!

John
WA8TON / VO1TON

1380. re: 3b news

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-07 23:24:29 UTC
From: J. Burnley
Topic: 1380 Message: 1380

My guess is that since there are approximately 400
members of this group Steve can expect that many
orders (hi).

Like everyone else, I can't wait.

72/73, John NU0V

_____
Be a better Globetrotter. Get better travel answers from someone who knows. Yahoo! Answers
- Check it out.
http://answers.yahoo.com/dir/?link=list&sid=396545469

1381. Introductions...

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-08 04:35:23 UTC
From: ab9io
Topic: 1381 Message: 1381

Hello to the group,

My name is Tony, AB9IO. I'm in the process of building my first ATS-3A. The build has been going well so far. I did run into one problem: I should have placed the push buttons last! My rogue iron ate on of them - thankfully there was an extra in the pack!!! ;)

I look forward to getting involved in this great group.

Tony

1382. Code Warrior Paddles

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-08 18:12:15 UTC
From: John Paul
Topic: 1382 Message: 1382

Thanks everyone for responding.

I have found a treasure trove of information on the paddles

For the paddles. I am ordering some today and it is for that one

Unit only. I am seriously looking at some other sites too for their

Work.

JohnPaul/AB4PP

1383. Re: [AT_Sprint] Code Warrior Paddles

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-08 20:07:38 UTC
From: Larry
Topic: 1382 Message: 1383

JohnPaul,

If you're feeling adventuresome, try a pair of these:

mirror.wan-dki.net/onnowpurbo/library/library-sw-hw/amateur-radio/qrp/paddle.pdf

They work VERY well and have a good "feel"...

Larry, KT4G

1384. Build problems at TP1 on ATS-3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-08 22:56:46 UTC
From: ab9io
Topic: 1384 Message: 1384

Hello Group,

Well, I have the board populated and de-fluxed. It powers up with "20M" on a 9v battery. My next test didn't go so good, though. I can't get the requisite 4v from TP1 to GND as indicated in the manual. The voltage from the other side of R19 measures 4.98v to GND. R19 was checked and an ohm test from TP1 to pin 14 on U8 gives me 99.6k so I can be sure that R19 is placed well. I re-soldered the pins of U8 to confirm that they are down. I'm stumped at this point. Anyone have a suggestion?

73,

Tony, AB9IO

1385. Re: [AT_Sprint] Build problems at TP1 on ATS-3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-08 23:19:25 UTC
From: Karl Larsen
Topic: 1384 Message: 1385

ab9io wrote:
> Hello Group,
>
> Well, I have the board populated and de-fluxed. It powers up
> with "20M" on a 9v battery. My next test didn't go so good, though. I
> can't get the requisite 4v from TP1 to GND as indicated in the manual.
> The voltage from the other side of R19 measures 4.98v to GND. R19 was
> checked and an ohm test from TP1 to pin 14 on U8 gives me 99.6k so I
> can be sure that R19 is placed well. I re-soldered the pins of U8 to
> confirm that they are down. I'm stumped at this point. Anyone have a
> suggestion?
>
> 73,
>
> Tony, AB9IO
>
>
>
>
> Yahoo! Groups Links
>
>
>
>
>
Be sure you have the proper 3 volt regulator chip in place. It should
be soldered in right as well. Do a lot of checking with your voltmeter
and ohm meter and make sure all the voltages are about right.

--

Karl F. Larsen, AKA K5DI
Linux User
#450462 http://counter.li.org.

1386. Re: Build problems at TP1 on ATS-3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-09 00:26:54 UTC
From: ab9io
Topic: 1384 Message: 1386

Hi Karl,

Thanks for the reply. For good measure, I touched up the pins of both of the voltage regulators. I get 4.99v and 3.5v respectively. The oscillator and DDS chip seem to be getting 3.5v as well. Like I said, I'm stumped on this one. The pin on the DDS chip that is attached to TP1 goes near ground when power is applied. Therefore, the voltage across R19 reads approx. 4.98v. Strange!?!

Tony

1387. Re: [AT_Sprint] Build problems at TP1 on ATS-3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-09 00:28:16 UTC
From: Michael Harnage
Topic: 1384 Message: 1387

Tony,

Check that U11 (50MHz oscillator) is working and that
all the DDS pins are soldered good.

-mike/w1mt

--- ab9io <ab9io@...> wrote:

> Hello Group,
> I
> can't get the requisite 4v from TP1 to GND as
> indicated in the manual.
> The voltage from the other side of R19 measures
> 4.98v to GND. R19 was
> checked and an ohm test from TP1 to pin 14 on U8
> gives me 99.6k so I
> can be sure that R19 is placed well.

Fussy? Opinionated? Impossible to please? Perfect. Join Yahoo!'s user panel and lay it on us. http://surveylink.yahoo.com/gmrs/yahoo_panel_invite.asp?a=7

1388. RE: [AT_Sprint] Code Warrior Paddles

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-09 01:08:02 UTC
From: John Paul
Topic: 1382 Message: 1388

Thank Larry. I will give these a go. It looks like a good Saturday project. I will just try one and maybe both. If nothing else they would make good give away gifts at our next radio meeting. The plans that is.

JohnPaul/AB4PP

From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com] On Behalf Of Larry
Sent: Wednesday, August 08, 2007 4:08 PM
To: AT_Sprint@yahoogroups.com
Subject: Re: [AT_Sprint] Code Warrior Paddles

JohnPaul,

If you're feeling adventuresome, try a pair of these:

mirror.wan-dki.net/onnowpurbo/library/library-sw-hw/amateur-radio/qrp/paddle.pdf

They work VERY well and have a good "feel"...

Larry, KT4G

1389. Re: [AT_Sprint] Re: Build problems at TP1 on ATS-3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-09 01:56:50 UTC
From: Karl Larsen
Topic: 1384 Message: 1389

ab9io wrote:
> Hi Karl,
>
> Thanks for the reply. For good measure, I touched up the pins of both
> of the voltage regulators. I get 4.99v and 3.5v respectively. The
> oscillator and DDS chip seem to be getting 3.5v as well. Like I said,
> I'm stumped on this one. The pin on the DDS chip that is attached to
> TP1 goes near ground when power is applied. Therefore, the voltage
> across R19 reads approx. 4.98v. Strange!?!
>
> Tony
>
Hi Tony, Mike is right, there are just 4 pins on the 50 mhz oscillator
but it is easy to miss one pin. Hard to sdolder under all 4 corners.

Karl

>
>
> #450462 http://counter.li.org.

1390. Re: Build problems at TP1 on ATS-3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-09 04:55:07 UTC
From: ab9io
Topic: 1384 Message: 1390

Hi Karl & Mike,

Well, I got it! You guys were on the spot on this one. I had flowed the solder a bit high onto the oscillator. Just for good measure, I touched up all parts again and found a resistor loose.

Now, I'm reading 3.93v at TP1. The NOR gate is getting a signal, so the 2n7000 gates are at 0v. Good stuff! The last check is good and I'm ready to install L3.

Thank you both again for your help,

Tony, AB9IO

1391. Re: Build problems at TP1 on ATS-3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-09 16:45:38 UTC
From: Jim Fraser
Topic: 1384 Message: 1391

This is a bit off your topic, but I was wondering how you de-fluxed your ATS-3A board? In the past I did not worry about the flux residue much, but in recent projects I have made some attempts to cleanup the solder flux. I have tried a commercial product, an acetone-based nail polish remover and isopropyl alcohol. All just seem to leave a sticky mess all over the board. Any tips would be appreciated.

73

Jim K6JF

1392. Re: Build problems at TP1 on ATS-3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-09 17:20:01 UTC
From: ab9io
Topic: 1384 Message: 1392

Hi Jim,

The flux remover that I used is a product called Techspray Flux Remover G3. I saturated the board good-and-proper by using a sweeping motion from one side of the board to another. You may be able to get something like it at your local electronics store for about $10 to $15 a can. It comes in a spray paint can sized pressurized container and lasts a good long time. I have heard of using isopropyl and denatured alcohols and a toothbrush and the residue! I don't think that not de-fluxing the board will hurt anything, especially if the circuit works!

I will warn you that this is the "good stuff", but it will take some of the markings off of the black electrolytic caps on the board if one sprays it in that direction (I did). My recommendation is to de-flux the board well after soldering the SMDs and then leave that side of the board alone. After soldering the through-hole stuff, simply de-flux the bottom of the board. You should be in good shape!

The best product that I've found is call Flux-Off, but I can't get it here. Good luck!

Tony, AB9IO

1393. RE: [AT_Sprint] OT- Flux remover

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-09 17:21:44 UTC
From: Rob May
Topic: 1384 Message: 1393

We use this at work:
http://www.hmcelectronics.com/cgi-bin/scripts/product/5700-0019/
Expensive, but you don't have to use very much and it leaves a very clean board. Also uses CFC's so it's not environmentally friendly (in fact the solvent in it is being phased out). I find that I rarely need to use flux remover and don't have any at home. The can we have at work is several years old.
Rob
NV5E

>From: "Jim Fraser" <jimf53@...>
>Reply-To: AT_Sprint@yahoogroups.com
>To: AT_Sprint@yahoogroups.com
>Subject: [AT_Sprint] Re: Build problems at TP1 on ATS-3a
>Date: Thu, 09 Aug 2007 16:45:38 -0000
>
>This is a bit off your topic, but I was wondering how you de-fluxed
>your ATS-3A board? In the past I did not worry about the flux residue
>much, but in recent projects I have made some attempts to cleanup the
>solder flux. I have tried a commercial product, an acetone-based nail
>polish remover and isopropyl alcohol. All just seem to leave a sticky
>mess all over the board. Any tips would be appreciated.
>
>73
>
>Jim K6JF
>

A new home for Mom, no cleanup required. All starts here.
http://www.reallivemoms.com?ocid=TXT_TAGHM&loc=us

1394. Re: [AT_Sprint] Re: Build problems at TP1 on ATS-3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-09 18:45:48 UTC
From: Mark Brueggemann
Topic: 1384 Message: 1394

--- Jim Fraser <jimf53@...> wrote:

> wondering how you de-fluxed your ATS-3A board?

Something I find very effective is automotive brake cleaner,
$2 a large can on sale. It will attack some types of plastic so
you have to be careful, but it's an excellent flux cutter
and degreaser, and leaves no residue. I use it with all
of my electronics work.

Mark K5LXP
Albuquerque, NM

1395. For Sale, ATS3A Kit

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-09 20:02:49 UTC
From: jgaffke
Topic: 1395 Message: 1395

Mint condition ATS3A, $130
Still in the baggies, unassembled.

Bought this number two ATS3A when I was
planning significant hacks to my first ATS3A.
But life intervened, and haven't had time
to seriously break that first one, yet.
So $130 buys this unassembled ATS3A kit.
I'll pay postage inside the US.
Respond by sending email to jgaffke@...

Jerry Gaffke, KE7ER

1396. Re: [AT_Sprint] For Sale, ATS3A Kit

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-09 20:33:12 UTC
From: Chuck Milam
Topic: 1395 Message: 1396
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

1397. Re: For Sale, ATS3A Kit SOLD

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-09 20:39:24 UTC
From: jgaffke
Topic: 1395 Message: 1397

--- In AT_Sprint@yahoogroups.com, "jgaffke" <jgaffke@...> wrote:
>
> Mint condition ATS3A, $130
> Still in the baggies, unassembled.
>
> Bought this number two ATS3A when I was
> planning significant hacks to my first ATS3A.
> But life intervened, and haven't had time
> to seriously break that first one, yet.
> So $130 buys this unassembled ATS3A kit.
> I'll pay postage inside the US.
> Respond by sending email to jgaffke@...
>
> Jerry Gaffke, KE7ER
>

1398. Re: Build problems at TP1 on ATS-3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-09 20:59:12 UTC
From: Jim Fraser
Topic: 1384 Message: 1398

Thanks for the feedback guys.

Jim K6JF

1399. Re: [AT_Sprint] NO NOT ORDER ATS3B's YET!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-09 22:43:26 UTC
From: Bill Harris
Topic: 1297 Message: 1399

Hello Steve:

I know your very busy, so I am willing to offer a hand on getting a non-deposit, pre-order list established for the new 3B. You wouldn't be bothered with the gathering of names and can have full access to the list at any time. Might come in handy knowing how many to plan for on the first shipment. More than happy to help out.

72's
Bill Harris W7KXB

From: Steven Weber<mailto:kd1jv@...>
To: AT_Sprint@yahoogroups.com<mailto:AT_Sprint@yahoogroups.com>
Sent: Thursday, July 05, 2007 1:24 PM
Subject: [AT_Sprint] NO NOT ORDER ATS3B's YET!

Gang,

Please don't order any of these yet! I have enough to do already and keeping track of pre-orders, keeping want lists, etc, just slows down the work that has to be done first. And there's still pleanty of that to do. Maybe I'll have everything ready sometime in August, but I have a lot of distractions during the summer, so Sept is still more likely. Keeping track of Paypal is a real pain for me and I'd really rather you not use that method unless there is no other choice, like your a DX station.

Thanks for your understanding.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com<http://kd1jv.qrpradio.com/>

1400. Re: Build problems at TP1 on ATS-3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-10 04:57:34 UTC
From: Jim Fraser
Topic: 1384 Message: 1400

Tonight I soldered up the second of two zero beat indicator boards I had bought, but this time I used some of the .020 solder I bought for a recent surface-mount project. The second board was virtually flux free compared to the first board where I had used .032 solder. I think I found my solution!

Looking forward to getting to work on the ATS-3B!

72/73 de Jim K6JF

1401. Re: Build problems at TP1 on ATS-3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-10 11:12:14 UTC
From: Bruce Beford
Topic: 1384 Message: 1401

--- In AT_Sprint@yahoogroups.com, "Jim Fraser" <jimf53@...> wrote:
>
> Tonight I soldered up the second of two zero beat indicator boards
I
> had bought, but this time I used some of the .020 solder I bought
for a
> recent surface-mount project. The second board was virtually flux
free
> compared to the first board where I had used .032 solder. I think I
> found my solution!
>
> Looking forward to getting to work on the ATS-3B!
>
> 72/73 de Jim K6JF
>
Yes, Jim. I find that for most people, the .020 (or smaller) solder is much easier to control the amount applied. It makes for as much neater finished project. This is especially true for SMT work. Since goind to .020 several years ago, I only use my .031 for 'heavy duty applications like cable connectors and the like. ALL pc board work here, thru-hole or SMT is done with .020 or smaller.

Also, for those of you who frequent hamfests- If you don't already have a lifetime supply of smaller guage solder- It would be good to keep your eyes open in the flea market areas for good deals on rolls of solder. As Steve's recent experience with Mouser shows, you -don't- want to have to pay retail prices for it. At one local hamfest a couple of years ago, I was able to buy several rolls of .020 and smaller for cheap.

72/73,
Bruce N1RX

1402. Need a soldering iron...

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-10 17:07:41 UTC
From: kt4g
Topic: 1402 Message: 1402

I'm creating a portable electronics toolbox for building/repairing QRP rigs away from home. Does anyone know of a small temp-controlled soldering station (other than a small Weller) at a reasonable price?

I'd like it to be a bit smaller than my Hakko 936. I'd appreciate any wisdom anyone could share here...

73,
Larry KT4G

1403. Re: [AT_Sprint] Need a soldering iron...

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-10 17:22:00 UTC
From: bgriffin
Topic: 1402 Message: 1403

http://www.allelectronics.com/cgi-bin/item/IR-258/570/16-30W_VARI-TEMP_SOLDERING_IRON_.html

Try the above link,

Bill, ni5x.

> I'm creating a portable electronics toolbox for building/repairing QRP
> rigs away from home. Does anyone know of a small temp-controlled
> soldering station (other than a small Weller) at a reasonable price?
>
> I'd like it to be a bit smaller than my Hakko 936. I'd appreciate any
> wisdom anyone could share here...
>
> 73,
> Larry KT4G
>
>
> Messages in this topic
> <http://groups.yahoo.com/group/AT_Sprint/message/1402;_ylc=X3oDMTM1NDh2b2JpBF9TAzk3MzU5NzE0BGdycElkAzE4MDM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARtc2dJZAMxNDAyBHNlYwNmdHIEc2xrA3Z0cGMEc3RpbWUDMTE4Njc2NTg1MQR0cGNJZAMxNDAy>
> (1) Reply (via web post)
> <http://groups.yahoo.com/group/AT_Sprint/post;_ylc=X3oDMTJxNXFqcjduBF9TAzk3MzU5NzE0BGdycElkAzE4MDM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARtc2dJZAMxNDAyBHNlYwNmdHIEc2xrA3JwbHkEc3RpbWUDMTE4Njc2NTg1MQ--?act=reply&messageNum=1402>
> | Start a new topic
> <http://groups.yahoo.com/group/AT_Sprint/post;_ylc=X3oDMTJmcXVsdm1pBF9TAzk3MzU5NzE0BGdycElkAzE4MDM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARzZWMDZnRyBHNsawNudHBjBHN0aW1lAzExODY3NjU4NTE->
>
> Messages
> <http://groups.yahoo.com/group/AT_Sprint/messages;_ylc=X3oDMTJmZWJjZ2JhBF9TAzk3MzU5NzE0BGdycElkAzE4MDM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARzZWMDZnRyBHNsawNtc2dzBHN0aW1lAzExODY3NjU4NTE->
> | Files
> <http://groups.yahoo.com/group/AT_Sprint/files;_ylc=X3oDMTJnZ282bXJoBF9TAzk3MzU5NzE0BGdycElkAzE4MDM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARzZWMDZnRyBHNsawNmaWxlcwRzdGltZQMxMTg2NzY1ODUx>
> | Photos
> <http://groups.yahoo.com/group/AT_Sprint/photos;_ylc=X3oDMTJmbWY4c3NwBF9TAzk3MzU5NzE0BGdycElkAzE4MDM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARzZWMDZnRyBHNsawNwaG90BHN0aW1lAzExODY3NjU4NTE->
> | Links
> <http://groups.yahoo.com/group/AT_Sprint/links;_ylc=X3oDMTJnY2U0dXVwBF9TAzk3MzU5NzE0BGdycElkAzE4MDM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARzZWMDZnRyBHNsawNsaW5rcwRzdGltZQMxMTg2NzY1ODUx>
> | Database
> <http://groups.yahoo.com/group/AT_Sprint/database;_ylc=X3oDMTJkcXN2a202BF9TAzk3MzU5NzE0BGdycElkAzE4MDM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARzZWMDZnRyBHNsawNkYgRzdGltZQMxMTg2NzY1ODUx>

> | Polls
> <http://groups.yahoo.com/group/AT_Sprint/polls;_ylc=X3oDMTJncmZudHVhBF9TAzk3MzU5NzE0BGdy
cElkAzE4MDM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARzZWMDZnRyBHNsawNwb2xscwRzdGltZQMxMTg2NzY1ODUx>
> | Members
> <http://groups.yahoo.com/group/AT_Sprint/members;_ylc=X3oDMTJmNmRqb29vBF9TAzk3MzU5NzE0BG
dycElkAzE4MDM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARzZWMDZnRyBHNsawNtYnJzBHN0aW1lAzExODY3NjU4NTE-
>
> | Calendar
> <http://groups.yahoo.com/group/AT_Sprint/calendar;_ylc=X3oDMTJlcnRuNTNqBF9TAzk3MzU5NzE0B
GdycElkAzE4MDM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARzZWMDZnRyBHNsawNjYWwEc3RpbWUDMTE4Njc2NTg1MQ-
->
>
> Yahoo! Groups
> <http://groups.yahoo.com/;_ylc=X3oDMTJlczVrbTRpBF9TAzk3MzU5NzE0BGdycElkAzE4MDM1NzIzBGdyc
HNwSWQDMTcwNTA2MzEwOARzZWMDZnRyBHNsawNnZnAEc3RpbWUDMTE4Njc2NTg1MQ-->
>
> Change settings via the Web
> <http://groups.yahoo.com/group/AT_Sprint/join;_ylc=X3oDMTJnbXJuZGxqBF9TAzk3MzU5NzE0BGdyc
ElkAzE4MDM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARzZWMDZnRyBHNsawNzdG5ncwRzdGltZQMxMTg2NzY1ODUx>
> (Yahoo! ID required)
> Change settings via email: Switch delivery to Daily Digest
> <mailto:AT_Sprint-digest@yahoogroups.com?subject=Email%20Delivery:%20Digest>
> | Switch format to Traditional
> <mailto:AT_Sprint-traditional@yahoogroups.com?subject=Change%20Delivery%20Format:%20Trad
itional>
>
> Visit Your Group
> <http://groups.yahoo.com/group/AT_Sprint;_ylc=X3oDMTJlMGV2OXUwBF9TAzk3MzU5NzE0BGdycElkAz
E4MDM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARzZWMDZnRyBHNsawNocGYEc3RpbWUDMTE4Njc2NTg1MQ-->
> | Yahoo! Groups Terms of Use <http://docs.yahoo.com/info/terms/> |
> Unsubscribe <mailto:AT_Sprint-unsubscribe@yahoogroups.com?subject=>
>

1404. Re: [AT_Sprint] Code Warrior Paddles

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-10 18:00:08 UTC
From: Philip Hahn
Topic: 1382 Message: 1404
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

1405. Re: Build problems at TP1 on ATS-3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-11 08:27:16 UTC
From: ab9io
Topic: 1384 Message: 1405

FB on that Jim!

I actually finished my 3a this afternoon with the winding of the 80m coils. Boy, are my hands sore! ;) Mine actually receives quite well on 20m so far and the frequency announcement is spot-on. I still have the alignment stage to go (and casing), but everything is working out well.

GL,

Tony, AB9IO

1406. SC-02 solar charger + ATSx

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-12 21:29:15 UTC
From: kd1jv
Topic: 1406 Message: 1406

Upps. don't hit enter when your still in the subject block!

Those of you who are aslo on qrp-l know that I got a little solar powered battery charger the other day. The device is sold by a reseller (Promotek) on Amazon.com for $19.95 + $3.00 shipping. Mine only cost $11.99 + $6.00 shipping, so I guess they decided to change the pricing when a bunch of qrp-l guys started buying them and they relised they had a hot item on thier hands.

Anyway, if you missed the description on qrp-l, its a little box about the size of an Altiods tin but half the heigth and has a little solar panel on top and a 1100 mahr lithium cell and boost switcher inside. Selectable outputs of 5.8/7.8/9.8 volts.

I bought this to help keep batteries in my new PDA and MP3 player charged on the trail, but it looked like a likely candiate to power a ATS3x rig. And it does, sort of. The switcher causes a high pitched whine in the audio and the output voltage drops to 5 volts when you try to transmit.

I thought getting inside the box to see what was in there might be tricky, but turns out its held together with hot glue. A couple of hours out in the sun on the roof of my car was enough to soften up the hot glue so that it came apart easy enough. There is a pretty big glob of glue between the solar panel and battery, but only a little dab of glue was actually holding one edge of the battery to the bottom of the plastic case.

It uses a MC34063A switcher chip and it was easy enough to find a data sheet for it, as Digi-Key sells the part. A little reverse engineering with the data sheet in hand showed the switcher is set up to regulate up to 100 ma output, not the 400 ma claimed by the instructions which came with the charger.

Changing the 0.5 ohm current sense resistor to 0.3 ohms was enough to boost the current output of the switcher to get just under 1 watt out of the ATS3B prototype. (was 600 mw out with the 0.5 ohm current sense resistor) There's a reverse polatrity diode in series with the chargers DC output and if this is shorted out, power output from the ATS3b is just over 1 watt. This is getting more reasonable. I figure a 0.22 or 0.15 ohm curent sense resistor would be ideal, and get the power output up to more like 1.5 watts. We don't want to push the lithium battery too hard, as the peak currents asked for it to deliver is getting to be on the order of 2.5 amps.

That still leaves the audio whine to content with. An additional filter section on the output of the supply should help that. As is,

there really isn't any room in the box to add one though. However, if the white flashlight and uV money checker LEDs are removed, along with thier on/off switch, there would be room on the circuit board to add the additional filter. Too bad that area of the board is at the opposite end from the DC output jack.

So, with these modification, this little 4 oz solar battery charger just might power the ATS3x nicely out in the field for a few hours, especially if there is sun to help it along.

72, Steve KD1JV

1407. Re: [AT_Sprint] SC-02 solar charger + ATSx

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-12 22:19:53 UTC
From: Jim Miller
Topic: 1406 Message: 1407

Hi Steve

Any idea what the solar panel to lithium circuit side look like? Do they just let it run straight in through a diode or is there any charging circuitry?

73

jim ab3cv

1408. File Upload Question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-12 22:28:27 UTC
From: kt4g
Topic: 1408 Message: 1408

Is there any trick to uploading files into the FILES section? Every time I try, my browser screen goes bland and says "connection was reset." Thanks in advance for any advice...

Larry KT4G

1409. Re: [AT_Sprint] SC-02 solar charger + ATSx

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-13 16:12:46 UTC
From: Steven Weber
Topic: 1406 Message: 1409

>Any idea what the solar panel to lithium circuit side look like? Do they
>just let it run straight in through a diode or is there any charging
>circuitry?
>
Goes straight into the battery through a diode. Same with the external DC
in jack, so don't try that with a well regulated supply at the 5.8 volts it
says is the input voltage. There is a third wire coming out of the battery
pack. Best I can determine its a 4.7 K resistor (thermistor?), but it is
simply used to turn on a transistor to light the "charging" led.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

1410. Re: [AT_Sprint] SC-02 solar charger + ATSx

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-13 17:46:00 UTC
From: Karl Larsen
Topic: 1406 Message: 1410

Steven Weber wrote:
>> Any idea what the solar panel to lithium circuit side look like? Do they
>> just let it run straight in through a diode or is there any charging
>> circuitry?
>>
>>
> Goes straight into the battery through a diode. Same with the external DC
> in jack, so don't try that with a well regulated supply at the 5.8 volts it
> says is the input voltage. There is a third wire coming out of the battery
> pack. Best I can determine its a 4.7 K resistor (thermistor?), but it is
> simply used to turn on a transistor to light the "charging" led.
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com
>
>
>
> Yahoo! Groups Links
>
>
>
>
>
>
Hi all, I have a National chip designed to be a Lithium battery
charger. It has a long paper about how it works and it is a bit complex.
So what I do now is be sure to use a charger that is MADE for the
battery. I do not think a solar cell of indefinite size should ever be
put to a Lithium cell through a diode. I have a 75 watt solar panel on
my trailer and it MUST have a regulator to charge a lead acid deep cycle
battery I use.

--

Karl F. Larsen, AKA K5DI
Linux User
#450462 http://counter.li.org.

1411. Re: SC-02 solar charger + ATSx

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-13 18:08:16 UTC
From: radio_kx0r
Topic: 1406 Message: 1411

--- In AT_Sprint@yahoogroups.com, Karl Larsen <k5di@...> wrote:
>
> Steven Weber wrote:
> >> Any idea what the solar panel to lithium circuit side look like?
Do they
> >> just let it run straight in through a diode or is there any
charging
> >> circuitry?
> >>
> >>
> > Goes straight into the battery through a diode. Same with the
external DC
> > in jack, so don't try that with a well regulated supply at the
5.8 volts it
> > says is the input voltage. There is a third wire coming out of
the battery
> > pack. Best I can determine its a 4.7 K resistor (thermistor?),
but it is
> > simply used to turn on a transistor to light the "charging" led.
> > 72,
> > Steve, KD1JV
> > "Melt Solder"
> > White Mountains of New Hampshire
> > http://kd1jv.qrpradio.com
> >
> >
> >
> > Yahoo! Groups Links
> >
> >
> >
> >
> >
> >
> >
> Hi all, I have a National chip designed to be a Lithium battery
> charger. It has a long paper about how it works and it is a bit
complex.
> So what I do now is be sure to use a charger that is MADE for the
> battery. I do not think a solar cell of indefinite size should ever
be
> put to a Lithium cell through a diode. I have a 75 watt solar panel
on
> my trailer and it MUST have a regulator to charge a lead acid deep
cycle
> battery I use.

>
>
> --
>
> Karl F. Larsen, AKA K5DI
> Linux User
> #450462 http://counter.li.org.
>
If the voltage coming out of the solar panel or charger is always
less than the maximum charge voltage specified for the lithium cell
or battery, and the current is limited to less than the maximum
charging current specified, there should be no problem over-charging
the lithium cell or battery.

However, the voltage put out by solar panels varies, even if there is
no load. In particular, the voltage goes up when the silicon is cold.
A typical silicon solar panel starts out high and then drops in
voltage as the silicon gets hot. On a hot day the effect is large
enough to cause a significant reduction in the power output and the
charging rate. Charge controllers are designed to deal with these
variations.

Charging a lithium cell or battery to a higher voltage than specified
may cause permanent damage and/or lead to catastrophic failure.
Please be careful about this.

1412. Re: [AT_Sprint] SC-02 solar charger + ATSx

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-13 21:38:34 UTC
From: Steven Weber
Topic: 1406 Message: 1412

> I do not think a solar cell of indefinite size should ever be
>put to a Lithium cell through a diode.

This is true, but the little solar panel which comes hooked up to this battery is lucky to charge it at all! And only if you can some how manage to have noon day sun for 10 hours.

However, be careful of the external charger jack. With out at least a current limiting resistor in series or a proper lithium charger circuit built into the external supply, that could cause damage! I imagine the optional AC charger which is suppost to go with this gizzmo is pretty much next to impossable to find. Better just stick with the sun.

BTW, I've given up trying to get more current out of the built in switcher. Seems it needs a minimum of 4.5 volts to get 400 ma out of it and stay regulated. Might try some of those new super caps on the output - the ones designed to stiffen up power supplies by supplying peak currents.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

1413. NAQCC August Sprint

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-14 03:38:57 UTC
From: Larry Makoski
Topic: 1413 Message: 1413

This Tuesday evening, the North American QRP CW Club will be holding its monthly sprint.

Here are the particulars:

Date and time:
Wednesday, August 15th, 0030-0230 UTC
(Remember that's Tuesday evening here in the USA) That's 8:30 - 10:30 EDT, 7:30 - 9:30 CDT, 6:30 - 8:30 MDT and 5:30 - 7:30 PDT.

Bands - Frequencies:
80M - 3555-3565 kHz (Be courteous to FISTS operating on 3558 kHz)
40M - 7039-7050 kHz (Avoid W1AW on 7047.5 kHz).
20M - 14059-14065 kHz. General:
A particular station may be worked once on each band. Operate CW only. All licensed amateurs are invited to participate, but only those operating QRP (5 watts or less) are eligible for awards.

Call: CQ NA

Exchange:
RST - SPC (State Province or Country) - NAQCC Nr.
(non-Members substitute power level for NAQCC Nr., e.g. 5W, 1W, etc. Be sure to add the W.)

QSO Points:
QSO with a Member, 2 points.
QSO with a Non-member, 1 point.

Multipliers:
Each USA state
Each VE province
Each country except W/VE
All multipliers count only once in the contest.

Bonus:
If you use only a straight key for the entire sprint, multiply your score by 2.
If you use only a bug for the entire sprint, multiply your score by 1.5.
If you key with anything other than a straight key or bug, there is no bonus multiplier.

Categories:
SWA - simple wire antennas - for those using a simple wire antenna per NAQCC definition.
GAIN - gain antennas - for those using other than a simple wire antenna.

Special Award:
The purpose of having a special award is to perhaps award a certificate to someone who knows they can't win one of the regular 1st/2nd/TNW certificates, but would still like one of our beautiful NAQCC certificates to display in the shack. Our special award this month goes to the one with the highest score who has in his log a station starting with A,K,N, and W.

The winner will win a set of CD's features K7QO, Chuck Adams' code course designed to increase code speed. Please see: http://www.arm-tek.net/~yoel//sprint200708.html for further details.

REMEMBER: You HAVE to be a NAQCC member to be eligible to win the CDs; and there's still plenty of time to join before Tuesday night's sprint. To join the NAQCC, please visit: http://www.arm-tek.net/~yoel//joinup.html

Entry Deadline:
All entries must be RECEIVED before 2400Z on August 21st 2007. So submit as soon as possible, especially regular mail entries.

For further information, please visit:
http://www.arm-tek.net/~yoel//sprintrules.html

1414. Re: [AT_Sprint] SC-02 solar charger + ATSx

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-14 04:58:41 UTC
From: Vojtěch Bubník
Topic: 1406 Message: 1414

> > I do not think a solar cell of indefinite size should ever be
> >put to a Lithium cell through a diode.
>
> However, be careful of the external charger jack. With out at least a
> current limiting resistor in series or a proper lithium charger circuit
> built into the external supply, that could cause damage! I imagine the
> optional AC charger which is suppost to go with this gizzmo is pretty much
> next to impossable to find. Better just stick with the sun.

I heard a lot of the Chinese MP3 players, that are charged from USB, have no better charger than a silicon diode and current limiting resistor in series with the single cell. LiPols shall not be charged over 4.2V, common LiPol protection circuits switch off at 4.3V. The cell will last longer, if it is charged to a maximum voltage of 4.1V, which yields only 80% of the capacity.

I once built a simple charger for my old Palm Vx PDA, which did not have an internal charging circuit. I built something like this
http://www.rcgroups.com/forums/attachment.php?attachmentid=99302.
LM317 regulators are not precise and their output voltage vary slightly with temperature,, but setting output voltage to 4.1V shall be safe enough to the cell.

73, Vojtech OK1IAK

1415. Re: SC-02 solar charger + ATSx

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-14 18:13:22 UTC
From: kc0vkn
Topic: 1406 Message: 1415

--- In AT_Sprint@yahoogroups.com, "kd1jv" <kd1jv@...> wrote:
>
> Upps. don't hit enter when your still in the subject block!
>
> Those of you who are aslo on qrp-l know that I got a little solar
> powered battery charger the other day. The device is sold by a
> reseller (Promotek) on Amazon.com for $19.95 + $3.00 shipping. Mine
> only cost $11.99 + $6.00 shipping, so I guess they decided to change
> the pricing when a bunch of qrp-l guys started buying them and they
> relised they had a hot item on thier hands.

I saw your post on QRP-L Steve, glad you shared.

I have a Solio, that I got as a fathers day present... I immediately looked at it and thought it'd be great for this; however, it seems to "mate" with the device you intend to charge. I haven't fussed with it to see if I can bypass it's intelligence without destroying it, so that I could power my ATS or other QRP gear...

It's significantly more expensive than what you discovered and offers similar utility, though.

The pack inside is standard, and could be replaced with something with higher capacity, which might make it really useful if you're going to be out for multiple (sunny) days. In my own tests it will come to full charge in an average day, but, one has to be careful that it stays in direct sun most of the time. Ultimately I ended up setting it on the front step of my house...

73,

Joe, KC0VKN

1416. Test -SRI

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-15 22:06:43 UTC
From: Terry WAØITP
Topic: 1416 Message: 1416

Just testing. Yahoo hasnt been sending messages to me
lately, from any of my group... Sri for taking up room in
you inbox..

I love this radio stuff!
72 73
Terry, WA?ITP
http://www.wa0dx.org/wa0itp
http://www.wa0dx.org
http://www.4sqrp.com/

1417. Re: [AT_Sprint] Test -SRI

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-16 00:05:37 UTC
From: web@aerosupply.org
Topic: 1416 Message: 1417

no problem e-mail is working

qsl?

----- Original Message -----
From: "Terry WAØITP" <wa0itp@...>
To: "AT Sprint" <AT_Sprint@yahoogroups.com>
Sent: Wednesday, August 15, 2007 6:06:43 PM (GMT-0500) America/New_York
Subject: [AT_Sprint] Test -SRI

Just testing. Yahoo hasnt been sending messages to me
lately, from any of my group... Sri for taking up room in
you inbox..

I love this radio stuff!
72 73
Terry, WAØITP
http://www.wa0dx.org/wa0itp
http://www.wa0dx.org
http://www.4sqrp.com/

1418. ATS-1 Mods?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-17 17:10:43 UTC
From: Hank Greeb
Topic: 1418 Message: 1418

kd1jv de n8xx

Hi Steve:

My ATS (no suffix, but lettuce call it an ATS-I) arrived from a seller today. It seems complete - but I haven't fired it up. I figured I'd get the latest and greatest "straight poop" from the designer before I tried any DC on the device. The documentation which comes with it has a series of Mods which are from correspondence with you dated 6/1/2003 by the original owner.

Are there any newer mods or newer software for the device? Any watchouts? Is there or was there an 80 metre module made for that version of the ATS? I love working 80 metres! 40 is okay, but local yokels like 80 metres.

72/73 de n8xx Hg

1419. New poll for AT_Sprint

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-17 17:25:22 UTC
From: AT_Sprint@yahoogroups.com
Topic: 125 Message: 1419

Enter your vote today! A new poll has been created for the
AT_Sprint group:

NEQRP club would like to know if there is any interest in
a kit to allow PSK31 on your ATS-2/3/3A/3B?

o yes if under $50
o yes if under $25
o NO

To vote, please visit the following web page:
http://groups.yahoo.com/group/AT_Sprint/surveys?id=2559152

Note: Please do not reply to this message. Poll votes are
not collected via email. To vote, you must go to the Yahoo! Groups
web site listed above.

Thanks!

1420. ATS doing PSK31

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-17 17:26:27 UTC
From: Ronald Pfeiffer
Topic: 1420 Message: 1420

AI have created a poll on the Yahoo group.

Please vote so the NEQRP club can get an idea if there is any interest

Thanks

rOn

A new home for Mom, no cleanup required. All starts here.
http://www.reallivemoms.com?ocid=TXT_TAGHM&loc=us

1421. Re: [AT_Sprint] ATS-1 Mods?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-17 18:33:51 UTC
From: Michael Harnage
Topic: 1418 Message: 1421

Hank,

I'm no Steve but the best info (other than Steve
himself) for the first ATS rig is at Monty's site:

< http://www.io.com/~n5fc/atsprint.htm >

There was no 80M module. The mpu was not the TI that
the later rigs employ so what you get on the chip is
pretty much it.

Enjoy that piece of ATS history!

-mike/w1mt

--- Hank Greeb <n8xx@...> wrote:

>
> Are there any newer mods or newer software for the
> device? Any
> watchouts? Is there or was there an 80 metre module
> made for that
> version of the ATS?

_____
Yahoo! oneSearch: Finally, mobile search
that gives answers, not web links.
http://mobile.yahoo.com/mobileweb/onesearch?refer=1ONXIC

1422. Re: [AT_Sprint] ATS-1 Mods?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-17 22:15:26 UTC
From: Steven Weber
Topic: 1418 Message: 1422

>There was no 80M module. The mpu was not the TI that
>the later rigs employ so what you get on the chip is
>pretty much it.

The ATS-1 uses a 90S2313 atmel chip, which only has 2K of memory, but is reprogrammable. All 2K is used. I suppose it would be possible to make it do 80M if you were willing to loose one of the other bands, but you'd be on your own as to figuring out the new filter values. And you'd have to wait for me to get around to changing the program. At the moment, that could be a long wait!

I did rewrite the firmware some time back, which added DFE mode and made it work as similer to the ATS2/3 as possible. I belive I made it calculate the DDS tuning word on the fly instead of adding/subtracting fixed steps and added the DDS reference calibration mode. I *might* have the documentation for those changes kicking around the hard drive someplace...

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

1423. Re: [AT_Sprint] New poll for AT_Sprint

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-17 22:36:16 UTC
From: Steven Weber
Topic: 125 Message: 1423

>NEQRP club would like to know if there is any interest in
>a kit to allow PSK31 on your ATS-2/3/3A/3B?
>
I don't know what this is all about. No one from NEQRP has contacted me
about this idea. Whats up guys?

I am working with Vojtech, OK1IAK to add his digi mode firmware to the
ATS3B, but not sure we'll have it all straighten out in time to include
with the first batch of kits to go out, hopefully in a couple more weeks.
Hopefully I can put some time into it this weekend. It will require using
his Digi-mode software for the Pocket PC. Not sure if it will run on a desk
top or lap top? It will also require an interface board, possibly just a
simple op amp.

Currently, there is not enough memory space available in the processor used
with the 2/3 or 3A to support digital modes without loosing a number of the
other functions. The processor would have to be removed and replaced with a
chip with larger memory capacity to keep all the current features.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

1424. Re: [AT_Sprint] New poll for AT_Sprint

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-18 06:50:22 UTC
From: Vojtěch Bubník
Topic: 125 Message: 1424

Hi gang.

> Hopefully I can put some time into it this weekend. It will require using
> his Digi-mode software for the Pocket PC. Not sure if it will run on a desk
> top or lap top?

There are three windows flavors supported: Pocket PC, Handheld PC 2000 and the usual desktop windows since Windows 95.

> It will also require an interface board, possibly just a simple op amp.

I already built the op-amp interface board into the ATS-3a on a piece of prefo board, mostly with SMD parts. As adviced by Steve, I glued it to the processor by a double sided tape. Because I doubled up/down buttons with the touch pads and am able to touch key with it, I reused the key jack socket for sound in/out. One may now connect Pocket PC to the TRX just with a single audio cable. I am happy to get rid of the octopus of the external interface. I will post pictures soon.

> Currently, there is not enough memory space available in the processor used
> with the 2/3 or 3A to support digital modes without loosing a number of the
> other functions. The processor would have to be removed and replaced with a
> chip with larger memory capacity to keep all the current features.

That's true. One may decide which features to sacrifice during compile time of the firmware. But I suppose the biggest inconvenience is to send the TRX for programming or buy/build the programmer, learn the programming software and do it yourself. But anyway, I would be happy to help.

73, Vojtech OK1IAK

1425. August RFTB

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-19 00:12:16 UTC
From: Larry Makoski
Topic: 1425 Message: 1425

This Sunday evening the Flying Pigs Amateur Radio Club International will be holding its monthly Run For The Bacon. This is a friendly, two hour QRP CW Sprint, which is open to ALL radio amateurs, will last from 9:00 - 11:00PM EDT (0100-0300 UTC Monday).

You may work stations once per band on 160, 80, 40, 20, 15 or 10 Meters. Suggested starting frequencies are 1.812, 3.562, 7.044, 14.062, 21.062, and 28.062 MHz.

The exchange is RST, S/P/C (State, Province, Country) and Flying Pigs membership number. If you're not a member of the Flying Pigs, and would like to be; then please click on the "membership" hyperlink on .http://www.gentzow.com/fpqrp/ Otherwise, non-members can just use their output power figure.

You can report your score via the Autolog page which can be found at :
http://gentzow.com/fpqrp/autolog.asp
or you can mail your logs to the address given on the Autolog page. The deadline for logs is August 26th at 2400 UTC.

Hope to catch you on the air Sunday evening!

--
73 de Larry W2LJ
QRP - When you care to send the very least!

http://www.w2lj.qrpradio.com
http://w2lj.blogspot.com/

1426. ATS3a - digital with manchester interface published

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-19 20:26:20 UTC
From: Vojtěch Bubník
Topic: 1426 Message: 1426

Hi gang.

My first ATS-3a experiment needed an external BELL202 FSK decoder to read modulation commands generated by computer sound card. The interface was a bit bulky, the FSK chip expensive and not easy to tune. My goal was to build something simple and reproducible into main ATS3 tin.

I experimented with Manchester modulation the last weekend. Now I built the "slicer" data interface into my ATS-3a. You may find the circuit schematic and transceiver picture in the "ok1iak" photo album of this group. The new interface needs updated ATS3 firmware and PocketDigi software. You may get both of them on http://pocketdigi.sourceforge.net

I tried to find a way to add an additional jack socket for computer sound in/out connection, but failed. But now that my ATS-3a is keyed by the touch electrodes glued on the tin, I was able to sacrifice the paddle jack for computer interface. The slicer is built on a piece of prefo board and glued by a double sided tape to the microcontroller. Because PDA's do not usually have input mixer, I mounted a small trimmer with knob above the paddle socket to regulate Pocket PC sound input level.

If someone wants to try it on his ATS3a, he will need to program his transceiver himself. Mike's web page will be helpful: http://w1mt.qrpradio.com/ats3.html
In my latest firmware, one has to reduce the code size by disabling some of the features to fit it all into 4k flash.

73, Vojtech OK1IAK

1427. Run for the Bacon, 8/19/2007, 6:00 pm

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-20 00:55:20 UTC
From: AT_Sprint@yahoogroups.com
Topic: 1427 Message: 1427

Reminder from: AT_Sprint Yahoo! Group
http://groups.yahoo.com/group/AT_Sprint/cal

Run for the Bacon
Sunday August 19, 2007
6:00 pm - 8:00 pm
(This event repeats every month on the third Sunday.)
Location: Your shack or anywhere

Notes:
This Sunday evening, the Flying Pigs Amateur Radio Club International will be holding its monthly Run For The Bacon. This is a friendly, two hour QRP CW Sprint, which is open to ALL radio amateurs, will last from 9:00 - 11:00PM EDT (0200-0400 UTC Monday).

You may work stations once per band on 160, 80, 40, 20, 15 or 10 Meters. Suggested starting frequencies are 1.812, 3.562, 7.044, 14.062, 21.062, and 28.062 MHz.

The exchange is RST, S/P/C (State, Province, Country) and Flying Pigs membership number. If you're not a member of the Flying Pigs, and would like to be; then please cli

All Rights Reserved
Copyright ? 2007
Yahoo! Inc.
http://www.yahoo.com

Privacy Policy:
http://privacy.yahoo.com/privacy/us

Terms of Service:
http://docs.yahoo.com/info/terms/

1428. Re: ATS3a - digital with manchester interface published

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-20 18:59:29 UTC
From: Bruce Beford
Topic: 1426 Message: 1428

--- In AT_Sprint@yahoogroups.com, Vojtìch Bubník <bubnikv@...> wrote:
>
> snip<

> I tried to find a way to add an additional jack socket for computer sound in/out connection, but failed. But now that my ATS-3a is keyed by the touch electrodes glued on the tin, I was able to sacrifice the paddle jack for computer interface. The slicer is built on a piece of prefo board and glued by a double sided tape to the microcontroller. Because PDA's do not usually have input mixer, I mounted a small trimmer with knob above the paddle socket to regulate Pocket PC sound input level.

> 73, Vojtech OK1IAK
>

Very fine, Vojtech! Thank you for keeping us informed on your project. I assume any dual op-amp that can run from low voltage single sided supply will work OK for the signal splitter.

Also, I am curious. You mention the small trimmer you added to adjust input level to your Pocket PC. Which Pocket PC do you use? Did this unit come with an audio input jack, or did you add one?

I have used your Pocket Digi s/w on a Dell Axim unit, but it has no input jack. I am right now using the microphone in the unit, near the speaker of the radio. I am thinking of hacking into the PDA case to add an audio input jack, and would like to hear if you had to do the same.

regards,
Bruce, N1RX

1429. ATS-3B Digi-mode - I think it works!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-21 01:46:07 UTC
From: kd1jv
Topic: 1429 Message: 1429

Spent all day working Vojtech's digi-mode firmware into the 3B code and I'll be - it seems to be working! I'll set up another rig and see if I can talk to myself, then we can be sure. Best I can tell, I only introduced one bug. For some reason, after intial power up, it now takes a couple of seconds before it will respond to the push buttons. Once they start working, everything is normal.

There are a couple of other things I'd like to add to the firmware before its called good to go. One is to see if the A/D converter can be used as a direct input from the sound card. It would be nice to not have to use an interface daughter board. The other thing is to make the code speed go up or down in 5 wpm incerments by clicking the tune up or tune down button when code speed adjust is active. Paddle would be normal 1 wpm incerments. This would be a quick way to adjust your speed to more or less match the other stations speed during contests. After that, I've kinda run out of ideas to what else to make this little box do :-)

Guess I'm still more or less on track to start accepting orders on September 1st. Boards should be just about ready to be sent my way and just need to make one more little order for parts. Okay, enough chit chat, time to go back to work looking for sneakely hidden bugs.

72, Steve KD1JV

1430. Re: [AT_Sprint] Re: ATS3a - digital with manchester interface published

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-21 05:25:07 UTC
From: Vojtěch Bubník
Topic: 1426 Message: 1430

Hi Bruce.

> I assume any dual op-amp that can run from low voltage
> single sided supply will work OK for the signal splitter.

I think so. I used MCP602 from Microchip, which is for $1 at our local "electronics drug store".

> Also, I am curious. You mention the small trimmer you added to adjust
> input level to your Pocket PC. Which Pocket PC do you use? Did this
> unit come with an audio input jack, or did you add one?

I have an old iPaq 3630. The device had bad battery and no mic connector. I got it very cheap.
I placed a 2.5mm SMD jack socket from an old cell phone into the stylus hole and wired internal microphone to it.

http://www.kufr.cz/~ok1iak/temp/iPaq-mic-mod.jpg.png

Here is a picture from Edwin PE1PWF on acoustic coupling:
http://home.wanadoo.nl/e.houwertjes/pics/acoustic.jpg

and his mic hack:
http://home.wanadoo.nl/e.houwertjes/pics/medion1.jpg
http://home.wanadoo.nl/e.houwertjes/pics/medion2.jpg
http://home.wanadoo.nl/e.houwertjes/pics/medion3.jpg
http://home.wanadoo.nl/e.houwertjes/pics/medion4.jpg

You will find some legend from Edwin in the discussion on pocketdigi.sourceforge.net

The setup worked well, but it needed two audio cables. One day, RF burned audio PA and grounds inside the PDA. It happend when I tuned another TX near the PDA/ATS interface setup, when the PDA was connected to the interface by two cables, which made ground loop. The burned audio PA ate battery very short. I was very lucky to find the problem, rewire burned grounds and removed and bridged the burned audio PA. Now the only limitation is high impedance audio output, which is not capable to power ear phones anymore. It works with the ATS interface though.

I removed the added 2.5mm socket recntly and connected internal microphone to the ring of 3.5mm earphone jack. Now the PDA is connected to TRX with just single cable without introducing ground loops. Aditionally, I found that the RX earphone output to PDA mic input needs to be attenuated more than 1:100 and I very much reccomend to place a voltage divider either directly into the PDA, or into the audio cable on the PDA side. If I put the voltage divider into the TRX, microphone picks bursts from the touch keyer. The bursts are spaced every 300Hz, which is the sampling interval of the touch keyer chip, and they are only audible, if I touch the electrodes. With the voltage divider on the PDA side, waterfall is undisturbed.

For those who plan to buy a PDA for PocketDigi, Patrick N0HR compiled a list of devices with microphone input. The list is probably not complete, there are lot of new devices, but it is certainly something to start with.
http://www.n0hr.com/PocketDigi/PocketDigi_Tigertronics_Interface.htm

73, Vojtech OK1IAK

1431. Re: [AT_Sprint] ATS-3B Digi-mode - I think it works!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-21 07:47:32 UTC
From: Vojtěch Bubník
Topic: 1429 Message: 1431

Hi Steve.

> Spent all day working Vojtech's digi-mode firmware into the 3B code
> and I'll be - it seems to be working!

That's a great news.

> ...
> After that, I've kinda run out of ideas to what else to
> make this little box do :-)

If I may have a little wish.

It is possible to send CW form PocketDigi with the digital firmware. The digital firmware has two transmit modes - PSK and MFSK. CW is sent with the PSK mode, only the phase does not change. Currently if CW is sent by PocketDigi, receiver is muted all the time. I was unable to modify PSK mode to do QSK CW. Namely I was unable to suppress terrible clicks of the sidetone.

If you pull out the interface cable during digital TX, it will continue transmitting. One may set up watchdog to switch transceiver to RX mode if there is no valid modulation command received for say 5 seconds. I will make sure that PocketDigi pads long steady tones and spaces with regular idle commands.

I really like the "buttons as a paddle or straight key" extension from Mike W1MT. I wonder whether

At the end, one feature that I will try to squeeze into my ATS-3a 4k flash yet - fast tuning.
Let's tune up fast. One would press tune up button and hold. By pressing the down button, the "Fast Up" will be activated.
The first "Fast Up" tick will move frequency to the nearest higher kHz and short beep. If you keep the two buttons pressed, it will tune another kHz Up and short beep. On 10kHz transition, it will double beep or beep with different tone. I guess tuning around will be faster than with DFE.

73, Vojtech OK1IAK

1432. Looking for an Expert on Surface Mount Devices

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-22 18:44:33 UTC
From: Hank Greeb
Topic: 1366 Message: 1432

I recently purchased a built ATS (original version, or ATS-I, though this was before there were version numbers). It's dated by KD1JV and copyright 2003. The person from whom I purchased it had it for several years, but never fired it up. He says, and I believe him, that the unit was sent to him as a working unit.

I'm reading N5ESE's mods, and it appears that there at least one mod which don't appear to be on the board. I'm hesitant to fiddle with it, since I have very limited experience with Surface Mount Devices.

I bought the unit because I'm just learning how to work with surface mount parts. I'd like to have something which is working, and which has a chance of working without blowing up a CPU or a final transistor because a mod hasn't been made. I'm on a learning curve toward purchasing an ATS-3b when it becomes available, but want to have something which works in the meantime.

I'd be willing to pay a "reasonable price" to have someone who is expert with surface mount devices take a look at the board and make the mods to minimize inrush current on the finals (I think that's the problem described which uses a 10 ohm resistor), and another which minimizes the probability that the CPU will crash (I think that mod is in place, but I'm not sure). From reading N5ESE's web site it appears that these two mods are the only ones which are critical (though some others might be useful?)

Any takers? Please advise off line.

Tnx es 72/73 de n8xx Hg

1433. Re: [AT_Sprint] Looking for an Expert on Surface Mount Devices

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-22 19:52:34 UTC
From: Karl Larsen
Topic: 1366 Message: 1433

Hank Greeb wrote:
> I recently purchased a built ATS (original version, or ATS-I, though
> this was before there were version numbers). It's dated by KD1JV and
> copyright 2003. The person from whom I purchased it had it for several
> years, but never fired it up. He says, and I believe him, that the unit
> was sent to him as a working unit.
>
> I'm reading N5ESE's mods, and it appears that there at least one mod
> which don't appear to be on the board. I'm hesitant to fiddle with it,
> since I have very limited experience with Surface Mount Devices.
>
> I bought the unit because I'm just learning how to work with surface
> mount parts. I'd like to have something which is working, and which has
> a chance of working without blowing up a CPU or a final transistor
> because a mod hasn't been made. I'm on a learning curve toward
> purchasing an ATS-3b when it becomes available, but want to have
> something which works in the meantime.
>
> I'd be willing to pay a "reasonable price" to have someone who is expert
> with surface mount devices take a look at the board and make the mods to
> minimize inrush current on the finals (I think that's the problem
> described which uses a 10 ohm resistor), and another which minimizes the
> probability that the CPU will crash (I think that mod is in place, but
> I'm not sure). From reading N5ESE's web site it appears that these two
> mods are the only ones which are critical (though some others might be
> useful?)
>
> Any takers? Please advise off line.
>
> Tnx es 72/73 de n8xx Hg
>
>
Hi Hank, you are too hard on yourself. Do this. Get a 9 volt battery wire and put the tiny plug for your radio battery power on it with the plus voltage on the inside pin. Get a 9 volt battery and plug it in to the wire. Now put your head phones on and, then plug in the battery. If you hear nothing unplug the battery. If you hear ats3 20 if you have 20 meter coils plugged in. Or you might hear ats1 since your radio is that old.

This is safe because the 9 volt battery will drop to nothing if there is a short somewhere, or to a low voltage if the current is too high.

I hope you have the manual for your radio. If not I think you can get it from Steve's web page. Follow the set up part of the manual and you will be so surprised how easy it is. Good practise for your ATS-3B

your getting.

--

Karl F. Larsen, AKA K5DI
Linux User
#450462 http://counter.li.org.

1434. ATS-3 manual

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-22 20:13:11 UTC
From: Karl Larsen
Topic: 1434 Message: 1434

Steve, your new web page is clean and nice but a lot of stuff is not there. I see the ats3b is going to be ready early September. I would like some time to read and offer changes on the AST3B manual

--

Karl F. Larsen, AKA K5DI
Linux User
#450462 http://counter.li.org.

1435. Re: [AT_Sprint] Looking for an Expert on Surface Mount Devices

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-22 21:21:41 UTC
From: Hank Greeb
Topic: 1366 Message: 1435

Thanks for the pep talk, Ken:

My unit is NOT an ATS-3 nor is it an ATS-3a. I have the "original ATS"
- no suffix - because it was the first in the series. I have
documentation, and a reference to K5ESE's web site with several
recommended mods, including one which is a "must" according to KD1JV.
One problem is that inrush current in one of the RF transistor circuits
can blow one or more transistors. This is one which I don't think is
implemented. It requires cutting a trace on the PCB and putting a 10 ohm
resistor in series with part of a transistor. There's a mod which
changes the source voltage for the CPU, but this appears to have been
done by the person who put the kit together.

I "probably" could cut the trace, and "probably" could solder a 10 ohm
SMD resistor, but I'd be more comfortable if I had a bit more experience
with surface mount devices.

72/73 de n8xx Hg

Karl Larsen wrote:
>
> Hank Greeb wrote:
> > I recently purchased a built ATS (original version, or ATS-I, though
> > this was before there were version numbers). It's dated by KD1JV and
> > copyright 2003. The person from whom I purchased it had it for several
> > years, but never fired it up. He says, and I believe him, that the unit
> > was sent to him as a working unit.
> >
> > I'm reading N5ESE's mods, and it appears that there at least one mod
> > which don't appear to be on the board. I'm hesitant to fiddle with it,
> > since I have very limited experience with Surface Mount Devices.
> >
> > I bought the unit because I'm just learning how to work with surface
> > mount parts. I'd like to have something which is working, and which has
> > a chance of working without blowing up a CPU or a final transistor
> > because a mod hasn't been made. I'm on a learning curve toward
> > purchasing an ATS-3b when it becomes available, but want to have
> > something which works in the meantime.
> >
> > I'd be willing to pay a "reasonable price" to have someone who is
> expert
> > with surface mount devices take a look at the board and make the
> mods to
> > minimize inrush current on the finals (I think that's the problem
> > described which uses a 10 ohm resistor), and another which minimizes
> the

> > probability that the CPU will crash (I think that mod is in place, but
> > I'm not sure). From reading N5ESE's web site it appears that these two
> > mods are the only ones which are critical (though some others might be
> > useful?)
> >
> > Any takers? Please advise off line.
> >
> > Tnx es 72/73 de n8xx Hg
> >
> >
> Hi Hank, you are too hard on yourself. Do this. Get a 9 volt battery
> wire and put the tiny plug for your radio battery power on it with the
> plus voltage on the inside pin. Get a 9 volt battery and plug it in to
> the wire. Now put your head phones on and, then plug in the battery. If
> you hear nothing unplug the battery. If you hear ats3 20 if you have 20
> meter coils plugged in. Or you might hear ats1 since your radio is
> that old.
>
> This is safe because the 9 volt battery will drop to nothing if
> there is a short somewhere, or to a low voltage if the current is too
> high.
>
> I hope you have the manual for your radio. If not I think you can
> get it from Steve's web page. Follow the set up part of the manual and
> you will be so surprised how easy it is. Good practise for your ATS-3B
> your getting.
>
> --
>
> Karl F. Larsen, AKA K5DI
> Linux User
> #450462 http://counter.li.org. <http://counter.li.org.>
>

1436. Re: [AT_Sprint] Looking for an Expert on Surface Mount Devices

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-22 20:52:01 UTC
From: Steven Weber
Topic: 1366 Message: 1436

Herb,

The only critical mod for the ATS-1 is a change in the way the DDS chip is powered. there should be a jumper or possibly a RFC between the tops of chip caps on either side of the DDS chip. (U8, about in the center of the board).

The reason for this is the DDS chip has sperate analog and digital supply pins. I incorrectly assumed these pins could have different supply voltages, so the digital side was powered from 3.3 volts and the analog side by 5 volts. This sometimes works, but sometimes causes the DDS chip to lock up, though it does not damage it. The mod disconnects the 5 volts going to the analog supply pin and jumpers it over to the 3.3 volt digital supply. Of course a track has to be cut before this is done. This is a track which is hard to see and connects the right hand side of C22 to the top of the larger cap to the right of the DDS chip.

Chances are good this mod has been made, so you don't have to worry about it. All the other mods aren't really needed and may or maynot make any noticable difference.

The only thing to remember is the ATS-1 is much more likely to be damaged by high SWR than the later versions, though these are not entirely immune. A resistive SWR bridge is definately recommended if you have to put a tuner between the rig and antenna.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

1437. Re: [AT_Sprint] ATS-3 manual

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-23 15:58:42 UTC
From: Steven Weber
Topic: 1434 Message: 1437

> Steve, your new web page is clean and nice but a lot of stuff is not
>there.

Its all there, you just have to use the navigation buttons on the right to get to the kit and homebrew projects pages.

>I see the ats3b is going to be ready early September. I would
>like some time to read and offer changes on the AST3B manual
>
The manual still isn't nearly done yet. I'm reluctant to post a "preliminary" manual, as that often gets people in trouble, then causes me lots of trouble.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

1438. Re: [AT_Sprint] ATS-3 manual

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-23 16:35:57 UTC
From: Karl Larsen
Topic: 1434 Message: 1438

Steven Weber wrote:
>> Steve, your new web page is clean and nice but a lot of stuff is not
>> there.
>>
>
> Its all there, you just have to use the navigation buttons on the right to
> get to the kit and homebrew projects pages.
>
>
>> I see the ats3b is going to be ready early September. I would
>> like some time to read and offer changes on the AST3B manual
>>
>>
> The manual still isn't nearly done yet. I'm reluctant to post a
> "preliminary" manual, as that often gets people in trouble, then causes me
> lots of trouble.
>
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com
>
>
>
> Yahoo! Groups Links
>
>
>
>
>
>
>
Agree,

--

Karl F. Larsen, AKA K5DI
Linux User
#450462 http://counter.li.org.

1439. ATS-3B goes DIGITAL!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-28 01:43:51 UTC
From: kd1jv
Topic: 1439 Message: 1439

Well, it always was sorta digital, with the uP, DDS and all, but now it will talk digital! (though strickly speaking, CW is a digital mode, just the oldest)

Many thanks to OK1IAK who wrote the digital modulation and sound card communications interface which made it all possible. I would have though it wasn't. Glad I was proven wrong.

It took me awhile to get what Vojtech wrote for the 3A to work in the 3B, but it finally does! I can copy myself sending PSK31, BPSK63, RTTY, MFSK16 and even CW sent from the keyboard of the PDA. It doesn't seem to like sending QPSK31 for some reason, but no one uses that mode anyway, so who cares? There are several other digital modes available, but I don't have the software to receive them. Vojtech says they work. He's also working on adding more modes too. Amazing.

Of course, these modes will only work with the Pocketdigi software. Any other digital mode software doesn't have the unique sound card control communications needed in them. Those programs are ment to be used with generic SSB rigs and we're special.

To top it off, I added a reverse paddle sense for you left handed ops and implemented the "stealth paddle" which enables using the tune up and tune down switches instead of an external paddle. Though using the switches isn't the easiest way to send Morse and will take some practice to get used to, it does work.

Whew, glad thats all done. Maybe I can get to bed a little earlier now. Though there is the manual to finish and parts to be sorted and bagged.

1440. Re: [AT_Sprint] ATS-3B goes DIGITAL!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-28 01:49:42 UTC
From: Bill Harris
Topic: 1439 Message: 1440

Forget Bed....No sleep until all parts are sorted and bagged and the first 100 are shipped. That's an order..

Carry-on
BillHarris
----- Original Message -----
From: kd1jv<mailto:kd1jv@...>
To: AT_Sprint@yahoogroups.com<mailto:AT_Sprint@yahoogroups.com>
Sent: Monday, August 27, 2007 6:43 PM
Subject: [AT_Sprint] ATS-3B goes DIGITAL!

Visit Your Group <http://groups.yahoo.com/group/AT_Sprint;_ylc=X3oDMTJmcmNkZTNtBF9TAzk3MzU5NzE0BGdycElkAzE4MDM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARzZWMDdnRsBHNsawN2Z2hwBHN0aW1lAzExODgyNjU0ODg->
Sell Online
Start selling with<http://us.ard.yahoo.com/SIG=12jsscqtl/M=493064.10729657.113333488674578/D=groups/S=1705063108:NC/Y=YAHOO/EXP=1188272688/A=4025291/R=0/SIG=12bsapn24/*http://us.rd.yahoo.com/evt=44092/*http://smallbusiness.yahoo.com/merchant>

our award-winning

e-commerce tools.

HDTV Support
on Yahoo! Groups<http://us.ard.yahoo.com/SIG=12jc93386/M=493064.10972170.11554072.8674578/D=groups/S=1705063108:NC/Y=YAHOO/EXP=1188272688/A=4670553/R=0/SIG=11f8fj6tf/*http://tech.groups.yahoo.com/group/samsunghd/>

Help with Samsung

HDTVs and devices

Real Food Group
Share recipes,<http://us.ard.yahoo.com/SIG=12j4su531/M=493064.11036139.11614791.8674578/D=groups/S=1705063108:NC/Y=YAHOO/EXP=1188272688/A=4725794/R=0/SIG=1192rfjiu/*http://groups.yahoo.com/group/realfood/>

restaurant ratings

and favorite meals.
.

1441. Re: [AT_Sprint] ATS-3B goes DIGITAL!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-28 02:09:56 UTC
From: John A. Evans - N0HJ
Topic: 1439 Message: 1441

So, is Steve accepting orders now?

72 - john - n0hj

1442. Re: ATS-3B goes DIGITAL!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-28 17:12:41 UTC
From: Jim Fraser
Topic: 1439 Message: 1442

Steve,

Go ahead and get some rest, we don't want you to be kitting while not alert!

Thanks for your part in the work on the digital modes for the ATS-3B. Being a CW and digital mode afficionado this is great news. How warm do the output transistors get with the increased duty cyle when running the likes of PSK, MFSK and RTTY? Is there room to slap heat sinks on those 2N7000s?

I am looking forward to the kit's release. I sold off a couple pieces of excess gear on eBay over the weekend to finance my ATS-3B purchase.

72,
Jim K6JF

1443. Ethical delema

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-28 22:31:14 UTC
From: kd1jv
Topic: 1443 Message: 1443

Not a day goes by that I don't get an email from someone asking if they can pre-order or pay for an ATS3B. What can I say but no, wait like everyone else. But what to do about the dozen or so checks that I've all ready gotten from people who sent one anyway or didn't ask first? Should I put these on the top of the pile or on the bottom? If your one of those who sent a check already, I know what your answer will be :-) (BTW, I haven't cashed any of these yet - its my policy not to until the kit is shipped)

I've come to a decision. I've been saying that orders will be accepted starting Sept 1st. Thats just a few days away and happens to fall on a Saturday and Labor day weekend to boot. So, we'll let you guys start ordering now. I said I'd let everyone in this group have first shot before updating my web site. This is fair notice.

It will still be 10-14 days before I can actually start sending out the kits. So, what I'll do is take all the orders that arrive by then, put them on the floor and mix them up, sweep them into a pile and work from the top of that. If there are less than 100, no problem. If there are more, those that end up at the bottom will have to wait until I can buy the parts I need to complete another round of 100. Fair enough?

Orders from US stations MUST be paid by check or money order. If you use paypal, I'll refund the money. Sending a check might not be as quick and convenient as paypal, but if you need to use a credit card to buy one of these, you shouldn't be!

DX stations can use paypal. Its the only practical way for them to pay with out a lot of trouble and extra expense. (DX price is $200.00) I'll figure out a way to get these orders into the random mix.

Let the mayham begin!

72, Steve KD1JV

1444. Re: [AT_Sprint] Ethical delema

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-28 22:40:02 UTC
From: Lee Mairs (SAG)
Topic: 1443 Message: 1444

Steve -
You forgot to tell us the cost!
73 de Lee
KM4YY/8

kd1jv wrote:
> Not a day goes by that I don't get an email from someone asking if they
> can pre-order or pay for an ATS3B. What can I say but no, wait like
> everyone else. But what to do about the dozen or so checks that I've
> all ready gotten from people who sent one anyway or didn't ask first?
> Should I put these on the top of the pile or on the bottom? If your one
> of those who sent a check already, I know what your answer will be :-)
> (BTW, I haven't cashed any of these yet - its my policy not to until
> the kit is shipped)
>
> I've come to a decision. I've been saying that orders will be accepted
> starting Sept 1st. Thats just a few days away and happens to fall on a
> Saturday and Labor day weekend to boot. So, we'll let you guys start
> ordering now. I said I'd let everyone in this group have first shot
> before updating my web site. This is fair notice.
>
> It will still be 10-14 days before I can actually start sending out the
> kits. So, what I'll do is take all the orders that arrive by then, put
> them on the floor and mix them up, sweep them into a pile and work from
> the top of that. If there are less than 100, no problem. If there are
> more, those that end up at the bottom will have to wait until I can buy
> the parts I need to complete another round of 100. Fair enough?
>
> Orders from US stations MUST be paid by check or money order. If you
> use paypal, I'll refund the money. Sending a check might not be as
> quick and convenient as paypal, but if you need to use a credit card to
> buy one of these, you shouldn't be!
>
> DX stations can use paypal. Its the only practical way for them to pay
> with out a lot of trouble and extra expense. (DX price is $200.00) I'll
> figure out a way to get these orders into the random mix.
>
> Let the mayham begin!
>
> 72, Steve KD1JV
>
>
>
>
> Yahoo! Groups Links

>
>
>
>
>

1445. Re: [AT_Sprint] Ethical delema

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-28 22:55:12 UTC
From: Gil Stacy
Topic: 1443 Message: 1445
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

1446. The check....

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-29 00:26:25 UTC
From: john
Topic: 1443 Message: 1446

is ready to go into the mail tomorrow Steve!

Congrats on your new baby!

1447. Pocket PC for ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-29 02:31:59 UTC
From: Rob May
Topic: 2156 Message: 1447

I have an interest in trying PSK-31 with the new '3B. I have no experience with Pocket PC's. I don't want to go out and drop a wad of cash on something that I'm buying to play around with. Can anyone recommend some older (cheaper) models of Pocket PCs that would be adequate for running Pocketdigi? I've seen Dell X5's and iPaq 2215's that run at 400 MHz that would be in my price range (~$100). Can anyone comment on these models or sugguest others?
73,
Rob
NV5E

See what you?re getting into?before you go there
http://newlivehotmail.com/?ocid=TXT_TAGHM_migration_HM_viral_preview_0507

1448. Re: Ethical delema

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-29 04:44:24 UTC
From: kd1jv
Topic: 1443 Message: 1448

> Steve -
> You forgot to tell us the cost!
> 73 de Lee
> KM4YY/8

I thought you all knew that $190.00 postpaid in US/Canada

1449. Re: [AT_Sprint] Pocket PC for ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-29 06:34:31 UTC
From: Vojtěch Bubník
Topic: 1447 Message: 1449

Hello Rob.

I develop PocketDigi on an old iPaq 3630 with Pocket PC 2002 system, 32MB ram and 206MHz CPU.
Generally, anything manufactured in 2002 and later shall work with PocketDigi.

It is possible to couple RX with Pocket PC by placing an ear bud on the internal microphone and it even works quite well, if you are in a quite place. But I would rather recommend to get hold of a device, which has external microphone input. Patrick N0HR compiled a list of devices, which supposedly have it. If the device has no mic input, you may hack it as I did.
http://www.n0hr.com/PocketDigi/PocketDigi_Tigertronics_Interface.htm

It is hard to recommend a particular device. There are a lot of them on the market and it is up to your taste. I would probably pick something newer with internal thumb keyboard. I suppose you may buy some Windows Mobile communicator from your cellular provider quite cheap.

If you are lucky, you may buy Jornada 720 on e-bay for hundred bucks. Jornada 720 is quite old design running Windows CE 3.0, no more manufactured, but it has a decent internal keyboard and 640x240 display. Handheld PCs are discontinued in favor of Windows Mobile devices. I still support Jornada 720, because some HAMs use it.

If you have more questions, please subscribe to hampocket at yahoogroups. Search the archive first and place the questions there.

73, Vojtech OK1IAK

1450. Re: Ethical delema

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-29 12:23:31 UTC
From: Tim
Topic: 1443 Message: 1450

--- In AT_Sprint@yahoogroups.com, "kd1jv" <kd1jv@...> wrote:
>
...but if you need to use a credit card to
> buy one of these, you shouldn't be!

> 72, Steve KD1JV

Man! This fellow is even smarter than I thought - more people
should have that attitude.

Steve, I've been waiting to order as you requested, but will send my
check out ASAP. Would it be considered cheating if I filled my
envelope with helium so it ends up on top of the pile? :)

Thanks in advance for a neat product!

Tim - KX3H -Pittsburgh, PA

1451. Re: [AT_Sprint] Pocket PC for ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-29 12:59:10 UTC
From: Rob May
Topic: 1447 Message: 1451

Thanks Vojtech, this gives me a lot of information to follow. Part of the reason (besides cost) of getting an older one is to be able to add the audio jack and do other hardware hacks. I'm comfortable doing that kind of work. Incredible job you've done on the software.
73,
Rob - NV5E

>From: Vojt?ch Bubn?k <bubnikv@...>
>Reply-To: AT_Sprint@yahoogroups.com
>To: AT_Sprint@yahoogroups.com
>Subject: Re: [AT_Sprint] Pocket PC for ATS-3B
>Date: Wed, 29 Aug 2007 08:34:31 +0200 (CEST)
>
>Hello Rob.
>
>I develop PocketDigi on an old iPaq 3630 with Pocket PC 2002 system, 32MB
>ram and 206MHz CPU.
>Generally, anything manufactured in 2002 and later shall work with
>PocketDigi.
>
>It is possible to couple RX with Pocket PC by placing an ear bud on the
>internal microphone and it even works quite well, if you are in a quite
>place. But I would rather recommend to get hold of a device, which has
>external microphone input. Patrick N0HR compiled a list of devices, which
>supposedly have it. If the device has no mic input, you may hack it as I
>did.
>http://www.n0hr.com/PocketDigi/PocketDigi_Tigertronics_Interface.htm
>
>It is hard to recommend a particular device. There are a lot of them on the
>market and it is up to your taste. I would probably pick something newer
>with internal thumb keyboard. I suppose you may buy some Windows Mobile
>communicator from your cellular provider quite cheap.
>
>If you are lucky, you may buy Jornada 720 on e-bay for hundred bucks.
>Jornada 720 is quite old design running Windows CE 3.0, no more
>manufactured, but it has a decent internal keyboard and 640x240 display.
>Handheld PCs are discontinued in favor of Windows Mobile devices. I still
>support Jornada 720, because some HAMs use it.
>
>If you have more questions, please subscribe to hampocket at yahoogroups.
>Search the archive first and place the questions there.
>
>73, Vojtech OK1IAK

Puzzles, trivia teasers, word scrambles and more. Play for your chance to win! http://club.live.com/home.aspx?icid=CLUB_hotmailtextlink

1452. Re: [AT_Sprint] Re: Ethical delema

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-29 14:43:20 UTC
From: Alan Biocca
Topic: 1443 Message: 1452

Well, paypal doesn't have to use a credit card. I hardly ever do, and I use paypal a lot. paypal can also print out all your shipping labels and pay your postage. Using checks is inconvenient, slow, time consuming and awkward - plus they can get lost in the mail.

Sounds like a great kit!

-- Alan, wb6zqz

At 05:23 AM 8/29/2007, Tim wrote:
>--- In AT_Sprint@yahoogroups.com, "kd1jv" <kd1jv@...> wrote:
> >
> ...but if you need to use a credit card to
> > buy one of these, you shouldn't be!
>
> > 72, Steve KD1JV

1453. RE: [AT_Sprint] Ethical delema

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-29 15:34:31 UTC
From: andrew.macallister@emersonprocess.com
Topic: 1443 Message: 1453

Yahoo!

The $190 check is in the mail!!!!

Andy W5ACM

From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com] On Behalf Of kd1jv
Sent: Tuesday, August 28, 2007 5:31 PM
To: AT_Sprint@yahoogroups.com
Subject: [AT_Sprint] Ethical delema

Not a day goes by that I don't get an email from someone asking if they can pre-order or pay for an ATS3B. What can I say but no, wait like everyone else. But what to do about the dozen or so checks that I've all ready gotten from people who sent one anyway or didn't ask first? Should I put these on the top of the pile or on the bottom? If your one of those who sent a check already, I know what your answer will be :-) (BTW, I haven't cashed any of these yet - its my policy not to until the kit is shipped)

I've come to a decision. I've been saying that orders will be accepted starting Sept 1st. Thats just a few days away and happens to fall on a Saturday and Labor day weekend to boot. So, we'll let you guys start ordering now. I said I'd let everyone in this group have first shot before updating my web site. This is fair notice.

It will still be 10-14 days before I can actually start sending out the kits. So, what I'll do is take all the orders that arrive by then, put them on the floor and mix them up, sweep them into a pile and work from the top of that. If there are less than 100, no problem. If there are more, those that end up at the bottom will have to wait until I can buy the parts I need to complete another round of 100. Fair enough?

Orders from US stations MUST be paid by check or money order. If you use paypal, I'll refund the money. Sending a check might not be as quick and convenient as paypal, but if you need to use a credit card to buy one of these, you shouldn't be!

DX stations can use paypal. Its the only practical way for them to pay with out a lot of trouble and extra expense. (DX price is $200.00) I'll figure out a way to get these orders into the random mix.

Let the mayham begin!

72, Steve KD1JV

1454. Re: [AT_Sprint] Re: ATS-3B goes DIGITAL!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-29 15:20:10 UTC
From: Steven Weber
Topic: 1439 Message: 1454

>Thanks for your part in the work on the digital modes for the ATS-3B.
>Being a CW and digital mode afficionado this is great news. How warm do
>the output transistors get with the increased duty cyle when running
>the likes of PSK, MFSK and RTTY? Is there room to slap heat sinks on
>those 2N7000s?

WIth TTY, the '7000's do get a bit toasty after a few minutes running at 12 volts - 4.5 watts out. Not yet alarmingly hot, but close. Long winded rag chews with RTTY probably isn't a good idea.

They run much cooler at a more conservative 2.5 watts out. PSK modes are a little better, as the PA gets turned off between phase changes so the duty cycle is somewhat less than 100%.

I have you mount the '7000's with the flat side flush to the circuit board which acts like a heat sink to some extent. Once the board is mounted in a tin, it should be possible to make a little aluminum "L" bracket to place over the '7000's to transfer some of the heat out to the tin.

Steve KD1JV
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

1455. Re: Ethical delema

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-29 17:51:46 UTC
From: Jim Fraser
Topic: 1443 Message: 1455

I would have handled those unsolicited 'pre-orders' differently, but obviously it was not my decision. In any event, my money order is in the mail and I am hopeful to be a winner the ATS-3B lottery if it comes to that.

Jim K6JF

1456. Ethical delema (Send mine later)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-29 20:04:38 UTC
From: Kurt Savegnago
Topic: 1443 Message: 1456

My check is in the mail and I DO NOT mind if Steve
sends mine AFTER everyone else's. Time is against me
as far as tackling the kit now, but I would like to
get the order in so as not risk it going OOP before I
order.

So guy's I don't mind if you're having fun before me.

Kurt Savegnago
KC9LDH
--- andrew.macallister@... wrote:

> Yahoo!
>
> The $190 check is in the mail!!!!
>
> Andy W5ACM
>
>
>
> _____
>
> From: AT_Sprint@yahoogroups.com
> [mailto:AT_Sprint@yahoogroups.com] On
> Behalf Of kd1jv
> Sent: Tuesday, August 28, 2007 5:31 PM
> To: AT_Sprint@yahoogroups.com
> Subject: [AT_Sprint] Ethical delema
>
>
>
> Not a day goes by that I don't get an email from
> someone asking if they
> can pre-order or pay for an ATS3B. What can I say
> but no, wait like
> everyone else. But what to do about the dozen or so
> checks that I've
> all ready gotten from people who sent one anyway or
> didn't ask first?
> Should I put these on the top of the pile or on the
> bottom? If your one
> of those who sent a check already, I know what your
> answer will be :-)
> (BTW, I haven't cashed any of these yet - its my
> policy not to until
> the kit is shipped)

>
> I've come to a decision. I've been saying that
> orders will be accepted
> starting Sept 1st. Thats just a few days away and
> happens to fall on a
> Saturday and Labor day weekend to boot. So, we'll
> let you guys start
> ordering now. I said I'd let everyone in this group
> have first shot
> before updating my web site. This is fair notice.
>
> It will still be 10-14 days before I can actually
> start sending out the
> kits. So, what I'll do is take all the orders that
> arrive by then, put
> them on the floor and mix them up, sweep them into a
> pile and work from
> the top of that. If there are less than 100, no
> problem. If there are
> more, those that end up at the bottom will have to
> wait until I can buy
> the parts I need to complete another round of 100.
> Fair enough?
>
> Orders from US stations MUST be paid by check or
> money order. If you
> use paypal, I'll refund the money. Sending a check
> might not be as
> quick and convenient as paypal, but if you need to
> use a credit card to
> buy one of these, you shouldn't be!
>
> DX stations can use paypal. Its the only practical
> way for them to pay
> with out a lot of trouble and extra expense. (DX
> price is $200.00) I'll
> figure out a way to get these orders into the random
> mix.
>
> Let the mayham begin!
>
> 72, Steve KD1JV
>
>

Slackware user since 1994

1457. Re: [AT_Sprint] Re: ATS-3B goes DIGITAL!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-29 16:46:46 UTC
From: Vojtěch Bubník
Topic: 1439 Message: 1457

> I have you mount the '7000's with the flat side flush to the circuit board
> which acts like a heat sink to some extent. Once the board is mounted in a
> tin, it should be possible to make a little aluminum "L" bracket to place
> over the '7000's to transfer some of the heat out to the tin.

I think it is quite possible to flip sides of the finals with the zener diode on ATS-3a. One would mount the FETs flat side up, underlay them with some spacer to be in line with the box, cut a sheet of alluminium of the size of ATS board and sandwich it against the finals.

It would be great for ATS-3c to have two holes across the finals to press the heat sink on them.

73, Vojtech OK1IAK

1458. New file uploaded to AT_Sprint

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-31 01:20:52 UTC
From: AT_Sprint@yahoogroups.com
Topic: 154 Message: 1458

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the AT_Sprint
group.

File : /Preliminary ATS3B manual.pdf
Uploaded by : kd1jv <kd1jv@...>
Description : Preliminary ATS3B manual, comments, corrections etc welcome.

You can access this file at the URL:
http://groups.yahoo.com/group/AT_Sprint/files/Preliminary%20ATS3B%20manual.pdf

To learn more about file sharing for your group, please visit:
http://help.yahoo.com/help/us/groups/files

Regards,

kd1jv <kd1jv@...>

1459. Re: [AT_Sprint] New file uploaded to AT_Sprint

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-31 01:59:59 UTC
From: k4bev@aol.com
Topic: 1459 Message: 1459

In a message dated 8/30/2007 8:23:56 PM Central Daylight Time,
AT_Sprint@yahoogroups.com writes:

a file has been uploaded to...

Hi Steve et All,

Would you like us to proofread the manual?

73, Don - K4BEV

********** Get a sneak peek of the all-new AOL at
http://discover.aol.com/memed/aolcom30tour

1460. ATS-3B Preliminary Manual

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-08-31 06:49:50 UTC
From: Jim Fraser
Topic: 1460 Message: 1460

Steve,

Thanks for uploading the preliminary ATS-3B Manual. I am a software engineer by trade and I have had to write and review many manuals over the years. I will print out the manual tommorrow and give you my comments (if any). I tend to be a nit-picky perfectionist, I hope you don't mind!

Jim K6JF

1461. New file uploaded to AT_Sprint

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-01 01:07:49 UTC
From: AT_Sprint@yahoogroups.com
Topic: 154 Message: 1461

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the AT_Sprint
group.

File : /Preliminary ATS3B manual.pdf
Uploaded by : kd1jv <kd1jv@...>
Description : revised preliminary manual 8-31-07 corrected color code for .01 and .1 caps in compsite layout diagram and grammer

You can access this file at the URL:
http://groups.yahoo.com/group/AT_Sprint/files/Preliminary%20ATS3B%20manual.pdf

To learn more about file sharing for your group, please visit:
http://help.yahoo.com/help/us/groups/files

Regards,

kd1jv <kd1jv@...>

1462. Re: [AT_Sprint] New file uploaded to AT_Sprint

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-02 07:05:06 UTC
From: w9ya@qrparci.net
Topic: 154 Message: 1462

Hey Steve and the gang;

Thanks much for the nice manual preview. As usual it is VERY well done. (I especially liked the 'bookmarks'.)

One thing I noticed during my first read-through;

L4 is labeled as L3 on the schematic.

Vy 72;

Bob
w9ya

>
> Hello,
>
> This email message is a notification to let you know that
> a file has been uploaded to the Files area of the AT_Sprint
> group.
>
> File : /Preliminary ATS3B manual.pdf
> Uploaded by : kd1jv <kd1jv@...>
> Description : revised preliminary manual 8-31-07 corrected color code
> for .01 and .1 caps in compsite layout diagram and grammer
>
> You can access this file at the URL:
> http://groups.yahoo.com/group/AT_Sprint/files/Preliminary%20ATS3B%20manual.pdf
>
>
> To learn more about file sharing for your group, please visit:
> http://help.yahoo.com/help/us/groups/files
>
> Regards,
>
> kd1jv <kd1jv@...>
>

Liviu Librescu - ?n veci pomenirea lui.
(May his memory be eternal.)

1463. Super caps + ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-04 02:51:48 UTC
From: kd1jv
Topic: 1463 Message: 1463

I bought a couple of those new low esr, 1 farad, 5v super caps (wired in series for 10V)to see if they would stiffen up my solar charger enough to allow it to be used during transmit. Unfortunetly, they didn't help that much.

But I figured what the heck, they should help extend the life of a 9 volt battery for use in the Spartin Sprint. They probably add less than 0.1 oz. Seems I forgot the sprint runs 8 to 10 in the summer and got a bit of a late start, late enough 20 had already shut down and 40 was winding down, so it didn't get much of a test. But I did notice the effective 0.5 farads of having them in series and charged to 9 V would run the rig for a over a minute before the audio level started to drop and took at least 3 minutes before they completly discharged. Pretty amazing.

I wired them directly to the board, inside the tin, which I now realize was a mistake. Got to wait at least a minute for the voltage to drop enough to get a reset when changing filter boards!

I don't have the part number handy, but they were only $2.50 each. There's another type rated for 12 volts, but they cost $25.00. I wonder if its worth the price to try those?

72, Steve KD1JV

1464. First run of ATS-3B SOLD OUT

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-04 17:29:50 UTC
From: Steven Weber
Topic: 1460 Message: 1464

As of todays mail, I have orders for 93 kits. This effectively sells them out, as I really only have 99. So, if your order isn't already in the mail, no need to bother now. As soon as I can get all these out, I'll start getting parts for another 100.

I discovered over the weekend I bought the wrong type of trimmer cap for some of the filter boards. I got tricked into getting top adjust caps instead of bottom adjust types, as I didn't look at the part diagram close enough. Apparently, Fig 1 showed straight leads and Fig 2 showed kinked leads, and I thought they were top or bottom adjust types. Oh well, I only bought 1000 of them!

I was going to make you use the top adjust anyway, even though you'd have to temperarly place them on the wrong side of the filter board to adjust them, then move them to the other side. But, I was able to piece together enough bottom adjust caps of different values to make do from Mouser today to cover all the kits. These parts are in transition from leaded to unleaded so thier inventory is a bit slim at the moment. I guess they want to sell out what they got now before getting the lead free ones. I helped them out a lot today :-)

These should be here by the end of the week, and will try to have everything else ready for when they do. With any luck, mass mailing of the kits should start next Monday.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

1465. Re: First run of ATS-3B SOLD OUT

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-04 20:07:34 UTC
From: Bruce Beford
Topic: 1460 Message: 1465

Sweet. Thanks for giving the Yahoo Group members first stab at these, Steve.

So, now what are you going to design that uses up those top-adjust trimmers?

-Bruce N1RX

1466. SMT solder question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-04 20:07:55 UTC
From: Ken Evans
Topic: 1466 Message: 1466

This group probably has as much SMT soldering experience as any on the web. I have seen the toaster oven and cup warmer methods described on the Electronic research Group page. Has any one used these methods? Any recommendations?

I have had good success using a sharp pointed iron and .015 solder - holding components with a tooth pick. But am always open to a better method.

Ken Evans, W4DU
QRP ARCI 696, GQRP 5918, FP 295, NOGA, ARRL Life

1467. Re: [AT_Sprint] SMT solder question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-04 20:44:47 UTC
From: Michael Harnage
Topic: 1466 Message: 1467

I have built 5 or 6 ATS rigs with the sharp solder tip
and small solder. I have since switched to the oven
method and will be using it from hence forth. The hot
air method works for me too.

No more individual pin soldering for me!

-mike

--- Ken Evans <w4du@...> wrote:

> This group probably has as much SMT soldering
> experience as any on the web.
> I have seen the toaster oven and cup warmer methods
> described on the
> Electronic research Group page. Has any one used
> these methods? Any
> recommendations?
>
> I have had good success using a sharp pointed iron
> and .015 solder - holding
> components with a tooth pick. But am always open to
> a better method.
>

Fussy? Opinionated? Impossible to please? Perfect. Join Yahoo!'s user panel and lay it on
us. http://surveylink.yahoo.com/gmrs/yahoo_panel_invite.asp?a=7

1468. Re: [AT_Sprint] SMT solder question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-04 21:07:07 UTC
From: Gil Stacy
Topic: 1466 Message: 1468
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

1469. Re: [AT_Sprint] SMT solder question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-04 21:31:22 UTC
From: Karl Larsen
Topic: 1466 Message: 1469

Ken Evans wrote:
> This group probably has as much SMT soldering experience as any on the web.
> I have seen the toaster oven and cup warmer methods described on the
> Electronic research Group page. Has any one used these methods? Any
> recommendations?
>
> I have had good success using a sharp pointed iron and .015 solder - holding
> components with a tooth pick. But am always open to a better method.
>
>
> Ken Evans, W4DU
> QRP ARCI 696, GQRP 5918, FP 295, NOGA, ARRL Life
>
>
>
I use Cash Olsen's method and it is simple cheap and works great. I
bought a one burner electric heater and a small pan at Wal Mart ($12.00)
which is the first heat source.

Then I bought on sale at HobbyLobby "the paper studio Embossing Heat
Tool" for $10.00. This heat source melts the solder and finishes the
heat work. You just stand over the small pan and blow the hotter air
over the card and the solder melts and all the things work.

--

Karl F. Larsen, AKA K5DI
Linux User
#450462 http://counter.li.org.

1470. SMT soldering

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-05 12:33:47 UTC
From: John Shadle
Topic: 1470 Message: 1470

Maybe this is a basic question, but I was wondering how people dealt with double-sided PCBs with SMT parts on both sides. Seems to me that finishing one side in the oven (or on a beverage warmer a la <http://www.zianet.com/erg/SMT_Soldering.html>) and then turning it over and doing the other side would loosen the first side's components.

I'm clearly missing something.

Since this will be my first SMT project, I have one of the NorCal dummy load kits to practice on. If anyone has great resources for SMT soldering I would greatly appreciate it. I've also seen the weighted parts holders (using wire from a hanger and a fishing weight), so I'm open to anything...

Thanks.
-john W4PAH

1471. Re: [AT_Sprint] SMT soldering

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-05 13:42:15 UTC
From: Gil Stacy
Topic: 1470 Message: 1471
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

1472. Re: [AT_Sprint] SMT soldering

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-05 14:00:43 UTC
From: Michael Harnage
Topic: 1470 Message: 1472

I did my last double sided board with the oven method
all in one shot. Surface tension kept the bottom
components on the board no problem.

If this is your first try with SMD then I recommend
the hot plate/embossing tool method and go slow.

-mike

--- John Shadle <shadle@...> wrote:

> Maybe this is a basic question, but I was wondering
> how people dealt
> with double-sided PCBs with SMT parts on both sides.
> Seems to me that
> finishing one side in the oven (or on a beverage
> warmer a la
> <http://www.zianet.com/erg/SMT_Soldering.html>) and
> then turning it over
> and doing the other side would loosen the first
> side's components.
>
> I'm clearly missing something.
>

Take the Internet to Go: Yahoo!Go puts the Internet in your pocket: mail, news, photos &
more.
http://mobile.yahoo.com/go?refer=1GNXIC

1473. Re: [AT_Sprint] SMT soldering

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-05 15:45:33 UTC
From: Kurt Savegnago
Topic: 1470 Message: 1473

I know this is stupid as a lot of folks use this
method but won't the components on the bottom side
get cooked too much? I mean you do one side first,
(Probably the one with the most components) then
the second side? Lastly through the board stuff
and sockets?

Kurt
KC9LDH
--- Michael Harnage <w1mt@...> wrote:

> I did my last double sided board with the oven
> method
> all in one shot. Surface tension kept the bottom
> components on the board no problem.
>
> If this is your first try with SMD then I recommend
> the hot plate/embossing tool method and go slow.
>
> -mike
>
> --- John Shadle <shadle@...> wrote:
>
> > Maybe this is a basic question, but I was
> wondering
> > how people dealt
> > with double-sided PCBs with SMT parts on both
> sides.
> > Seems to me that
> > finishing one side in the oven (or on a beverage
> > warmer a la
> > <http://www.zianet.com/erg/SMT_Soldering.html>)
> and
> > then turning it over
> > and doing the other side would loosen the first
> > side's components.
> >
> > I'm clearly missing something.
> >
>
>
>
>

> Take the Internet to Go: Yahoo!Go puts the Internet

> in your pocket: mail, news, photos & more.
> http://mobile.yahoo.com/go?refer=1GNXIC
>
>
>
> Yahoo! Groups Links
>
>
>
>
>

Slackware user since 1994

1474. Re: [AT_Sprint] SMT soldering

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-05 15:15:48 UTC
From: asfco@nycap.rr.com
Topic: 1470 Message: 1474

Do one side at a time
The side that you have already done will not be a concern as you will
not get the solder thats already there hot enough to loosen anything.
73
John W2GB

---- Original Message -----
From: Michael Harnage <w1mt@...>
Date: Wednesday, September 5, 2007 10:01 am
Subject: Re: [AT_Sprint] SMT soldering
To: AT_Sprint@yahoogroups.com

> I did my last double sided board with the oven method
> all in one shot. Surface tension kept the bottom
> components on the board no problem.
>
> If this is your first try with SMD then I recommend
> the hot plate/embossing tool method and go slow.
>
> -mike
>
> --- John Shadle <shadle@...> wrote:
>
> > Maybe this is a basic question, but I was wondering
> > how people dealt
> > with double-sided PCBs with SMT parts on both sides.
> > Seems to me that
> > finishing one side in the oven (or on a beverage
> > warmer a la
> > <http://www.zianet.com/erg/SMT_Soldering.html>) and
> > then turning it over
> > and doing the other side would loosen the first
> > side's components.
> >
> > I'm clearly missing something.
> >
>
>
>
>

> Take the Internet to Go: Yahoo!Go puts the Internet in your
> pocket: mail, news, photos & more.
> http://mobile.yahoo.com/go?refer=1GNXIC

>

1475. Re: [AT_Sprint] SMT soldering

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-05 17:39:39 UTC
From: Michael Harnage
Topic: 1470 Message: 1475

I put components on both sides of the board and cook
it in the oven in 1 step. My oven is a convection
oven. Only surface components done this way. Through
hole stuff done last manually.

-mike

--- Kurt Savegnago <ksaves2@...> wrote:

> I know this is stupid as a lot of folks use this
> method but won't the components on the bottom side
> get cooked too much? I mean you do one side first,
> (Probably the one with the most components) then
> the second side? Lastly through the board stuff
> and sockets?
>
> Kurt
> KC9LDH
> --- Michael Harnage <w1mt@...> wrote:
>
> > I did my last double sided board with the oven
> > method
> > all in one shot.

Moody friends. Drama queens. Your life? Nope! - their life, your story. Play Sims Stories
at Yahoo! Games.
http://sims.yahoo.com/

1476. RE: [AT_Sprint] SMT soldering

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-05 18:26:25 UTC
From: Ken Evans
Topic: 1470 Message: 1476

Thanks to all for the response on SMT soldering. Many commented that Wal Mart no longer carries the cup warmer mentioned on Cash's page. They do carry candle warmers that are similar, however they are rated at 17 watts and Cash's cup warmer was 9 watts. Also, Hobby Lobby carries candle warmers rated at 15 watts for $3.99 (Their hot air embossing tool is on sale as well for $10.00). I have the 17 watt version from Wal Mart. I will try it and watch to make sure it does get too hot.

Stay tuned.

Ken W4DU

1477. Re: [AT_Sprint] First run of ATS-3B SOLD OUT

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-05 18:55:07 UTC
From: sergej kindsvater
Topic: 1460 Message: 1477

Steve,

Do you normally acknowledge an order having been accepted? Probably
not by a rush like this one.
I am not sure if you have got my payment

Tks/72 de df6mu, sergej kindsvater

On 04/09/07, Steven Weber <kd1jv@...> wrote:
> As of todays mail, I have orders for 93 kits. This effectively sells them
> out, as I really only have 99. So, if your order isn't already in the mail,
> no need to bother now. As soon as I can get all these out, I'll start
> getting parts for another 100.
>
> I discovered over the weekend I bought the wrong type of trimmer cap for
> some of the filter boards. I got tricked into getting top adjust caps
> instead of bottom adjust types, as I didn't look at the part diagram close
> enough. Apparently, Fig 1 showed straight leads and Fig 2 showed kinked
> leads, and I thought they were top or bottom adjust types. Oh well, I only
> bought 1000 of them!
>
> I was going to make you use the top adjust anyway, even though you'd have
> to temperarly place them on the wrong side of the filter board to adjust
> them, then move them to the other side. But, I was able to piece together
> enough bottom adjust caps of different values to make do from Mouser today
> to cover all the kits. These parts are in transition from leaded to
> unleaded so thier inventory is a bit slim at the moment. I guess they want
> to sell out what they got now before getting the lead free ones. I helped
> them out a lot today :-)
>
> These should be here by the end of the week, and will try to have
> everything else ready for when they do. With any luck, mass mailing of the
> kits should start next Monday.
>
>
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com
>

--
Sergej Kindsvater
DF6MU, W6MHZ

Normal people believe that if it ain't broke, don't fix it. Engineers believe that if it ain't broke, it doesn't have enough features yet.

1478. Re: [AT_Sprint] SMT soldering

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-05 18:44:49 UTC
From: Karl Larsen
Topic: 1470 Message: 1478

Ken Evans wrote:
>
> Thanks to all for the response on SMT soldering. Many commented that
> Wal Mart no longer carries the cup warmer mentioned on Cash?s page.
> They do carry candle warmers that are similar, however they are rated
> at 17 watts and Cash?s cup warmer was 9 watts. Also, Hobby Lobby
> carries candle warmers rated at 15 watts for $3.99 (Their hot air
> embossing tool is on sale as well for $10.00). I have the 17 watt
> version from Wal Mart. I will try it and watch to make sure it does
> get too hot.
>
> Stay tuned.
>
> Ken W4DU
>
Do this Ken. Put a little water in the Candle Warmer and see if it
boils. If it boils in 3 minutes your too hot. If it boils in many
minutes your ok.

--

Karl F. Larsen, AKA K5DI
Linux User
#450462 http://counter.li.org.

1479. RE: [AT_Sprint] SMT soldering

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-05 21:08:50 UTC
From: Ken Evans
Topic: 1470 Message: 1479

I ended up with two candle warmers. One rated at 17 watts and 3.5 inches diameter, and one rated at 20 watts and 4.5 inches diameter. I did Karl's test per below and neither boiled water in 3 min (or 10 min for that matter). Both got to very warm to touch. Must get a thermometer. At any rate, it looks like the larger diameter and higher watt rating get just as hot as the smaller. The heat distribution/inch is the same. As soon as I get the flux from Cash, will try both, but it looks like they will do fine.

Ken W4DU

-----Original Message-----
From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com] On Behalf Of Karl Larsen
Sent: Wednesday, September 05, 2007 14:45
To: AT_Sprint@yahoogroups.com
Subject: Re: [AT_Sprint] SMT soldering

Ken Evans wrote:
>
> Thanks to all for the response on SMT soldering. Many commented that
> Wal Mart no longer carries the cup warmer mentioned on Cash's page.
> They do carry candle warmers that are similar, however they are rated
> at 17 watts and Cash's cup warmer was 9 watts. Also, Hobby Lobby
> carries candle warmers rated at 15 watts for $3.99 (Their hot air
> embossing tool is on sale as well for $10.00). I have the 17 watt
> version from Wal Mart. I will try it and watch to make sure it does
> get too hot.
>
> Stay tuned.
>
> Ken W4DU
>
Do this Ken. Put a little water in the Candle Warmer and see if it boils. If it boils in 3 minutes your too hot. If it boils in many minutes your ok.

--

Karl F. Larsen, AKA K5DI
Linux User
#450462 http://counter.li.org.

Yahoo! Groups Links

1480. Re: [AT_Sprint] First run of ATS-3B SOLD OUT

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-05 22:47:42 UTC
From: Steven Weber
Topic: 1460 Message: 1480

>Do you normally acknowledge an order having been accepted? Probably
>not by a rush like this one.
>I am not sure if you have got my payment

No, I don't normally conferm, takes way too much time with this many orders coming in at once. Need to spend that time bagging parts! But yes, it did come in. Paypay should have sent you a notice payment was sent.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

1481. ATS-3B Digital Interface

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-05 23:27:48 UTC
From: kt4g
Topic: 1481 Message: 1481

I'm curious: How exactly does the digital interface for the ATS-3B work? It looks to be a one-way only deal that allows for transmit only. How do you rig it for receive? I have a UTStarcom PPC-6700 that uses a 2.5mm 4 contact plug (tip, sleeve and two rings), and assume that the headphone out on the ATS connects to the mic input on the pocket PC.

Forgive me for asking what may be an obvious question to some of you, but this is (hopefully) my first experience with a kit of this kind.

73,
Larry KT4G

1482. Re: ATS-3B Digital Interface

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-06 03:41:32 UTC
From: kd1jv
Topic: 1481 Message: 1482

--- In AT_Sprint@yahoogroups.com, "kt4g" <kt4g@...> wrote:
>
> I'm curious: How exactly does the digital interface for the ATS-3B
> work? It looks to be a one-way only deal that allows for transmit
> only. How do you rig it for receive?

As you normally would, earphone out of the ATS-3B into AUX or mic input on a desktop or laptop. Most Pocket PC's - aka PDA style - don't have a mic jack input, so in that case, you place one earbud over the mic slots on the Pocket PC case and accustically couple.

The digtal interface is only used for talking to the ATS-3B so it knows when and what to transmit. Since the ATS can not directly use the normal audio modulation generated by the sound card as would be used in a SSB rig, a different system has to be devised. The Pocketdigi software by OK1IAK uses the sound card output to generate a UART serial communincations link to the rig and that information is used to direcly manipulate the DDS and keying as to generate the required modulation, at the proper baud rate.

1483. Re: SMT soldering

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-06 04:11:51 UTC
From: Andy
Topic: 1470 Message: 1483

In leaded (Pb) manufacturing, a standard double sided board goes through two reflow cycles and if it has through hole components it goes through a wave solder process which actually submerges the SMD components on the bottom side of the board in solder. The parts are held on the bottom side of the board with glue. In addition if rework is required most manufacturers allow their products to be subjected to additional reflow cycles and wave solder cycles.

In a lead free process the components are exposed to higher temperatures then in a leaded process. So in a nut shell you should be able to get away with exposing the board to several heat cycles without worry.

Andrew
KE7AHJ

--- In AT_Sprint@yahoogroups.com, Kurt Savegnago <ksaves2@...> wrote:
>
> I know this is stupid as a lot of folks use this
> method but won't the components on the bottom side
> get cooked too much? I mean you do one side first,
> (Probably the one with the most components) then
> the second side? Lastly through the board stuff
> and sockets?
>
> Kurt
> KC9LDH
> --- Michael Harnage <w1mt@...> wrote:
>
> > I did my last double sided board with the oven
> > method
> > all in one shot. Surface tension kept the bottom
> > components on the board no problem.
> >
> > If this is your first try with SMD then I recommend
> > the hot plate/embossing tool method and go slow.
> >
> > -mike
> >
> > --- John Shadle <shadle@...> wrote:
> >
> > > Maybe this is a basic question, but I was
> > wondering
> > > how people dealt
> > > with double-sided PCBs with SMT parts on both
> > sides.

> > > Seems to me that
> > > finishing one side in the oven (or on a beverage
> > > warmer a la
> > > <http://www.zianet.com/erg/SMT_Soldering.html>)
> > and
> > > then turning it over
> > > and doing the other side would loosen the first
> > > side's components.
> > >
> > > I'm clearly missing something.
> > >
> >
> >
> >
> >
>

> > Take the Internet to Go: Yahoo!Go puts the Internet
> > in your pocket: mail, news, photos & more.
> > http://mobile.yahoo.com/go?refer=1GNXIC
> >
> >
> >
> > Yahoo! Groups Links
> >
> >
> >
> >
> >
>
>

> Slackware user since 1994
>

1484. RE: [AT_Sprint] Re: SMT soldering

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-06 13:02:04 UTC
From: Ken Lotts
Topic: 1470 Message: 1484

Since there has been so much recent reference to SMT soldering using variants to "Cash Olsen's method" I am compelled to offer the fact that not everybody solders with an oven.

I successfully use a Hakko FM202 workstation, an optivisor with #10 lens, A halogen work light, the supplied solder and some fine braid wick.
I occasionally use a hot air rework station purchased a few years ago from sparkfun.com very similar to the link below:
http://www.sparkfun.com/commerce/product_info.php?products_id=74
(Sparkfun is a very fun spot to shop. Always loaded with cutting edge stuff.)

I do my best SM work in the morning while fresh and alert.

Ken Lotts
aa7jc

1485. Simpler digital interface for ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-06 15:56:53 UTC
From: Steven Weber
Topic: 1460 Message: 1485

I just tried out an idea I had last night to simplify the digital interface to the ATS3B and it seems to work. All it takes is two parts, a 47K resistor and 0.1 ufd cap!

The 47 K resistor goes from the Dash input to ground, which biases the port input pin to 1/2 the supply. The 0.1 cap couples to the audio out of the sound card. With the volume turned all the way up on the hx2495 PDA, there is enough signal to trigger the port and reliably send the Morse test message. Further tests will be needed to verify this is a reliable method, but it looks like it will do the trick.

Best thing is these two parts can be built into one of the cable plugs used to jumper from the PC to paddle jack. Just have to label the ends so you know which is which.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

1486. SV: [AT_Sprint] First run of ATS-3B SOLD OUT

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-07 07:39:15 UTC
From: EINAR LUNDBORG
Topic: 1460 Message: 1486

OK Steve,
You made the same mistake again,hi
72/73
Einar/-CBC

Steven Weber <kd1jv@...> skrev:
As of todays mail, I have orders for 93 kits. This effectively sells them out, as I really only have 99. So, if your order isn't already in the mail, no need to bother now. As soon as I can get all these out, I'll start getting parts for another 100.

I discovered over the weekend I bought the wrong type of trimmer cap for some of the filter boards. I got tricked into getting top adjust caps instead of bottom adjust types, as I didn't look at the part diagram close enough. Apparently, Fig 1 showed straight leads and Fig 2 showed kinked leads, and I thought they were top or bottom adjust types. Oh well, I only bought 1000 of them!

I was going to make you use the top adjust anyway, even though you'd have to temperarly place them on the wrong side of the filter board to adjust them, then move them to the other side. But, I was able to piece together enough bottom adjust caps of different values to make do from Mouser today to cover all the kits. These parts are in transition from leaded to unleaded so thier inventory is a bit slim at the moment. I guess they want to sell out what they got now before getting the lead free ones. I helped them out a lot today :-)

These should be here by the end of the week, and will try to have everything else ready for when they do. With any luck, mass mailing of the kits should start next Monday.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

Yahoo! Groups Links

L?na pengar utan s?kerhet.
S?k och j?mf?r hos Yahoo! Shopping.

1487. Re: [AT_Sprint] Simpler digital interface for ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-07 17:22:13 UTC
From: Vojtěch Bubník
Topic: 1460 Message: 1487

Hi Steve.

> The 47 K resistor goes from the Dash input to ground, which biases the port
> input pin to 1/2 the supply. The 0.1 cap couples to the audio out of the
> sound card. With the volume turned all the way up on the hx2495 PDA, there
> is enough signal to trigger the port and reliably send the Morse test
> message. Further tests will be needed to verify this is a reliable method,
> but it looks like it will do the trick.

I thought about this possibility before, but I compared the audio levels with the threshold of MSP430 Schmitt trigger inputs as defined in the datasheet and I rejected it. If it works for you, it is great. I wonder how reliable it is.

If it does not work reliable, one can increase amplitude by a small step up audio transformer.

73, Vojtech OK1IAK

1488. Production ATS-3B manual

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-11 01:55:20 UTC
From: kd1jv
Topic: 1488 Message: 1488

Hi Gang,

I just up loaded the final, production version of the ATS-3B manual. If you have copy of the preliminary manual on your computer, I would suggest deleting it! I found several errors in the assembly instructions and added a couple of new functions to the rig like using the tuning buttons as a paddle or straight key.

I belive I have found all the bugs in the new firmware, but its hard to be 100% sure when there are 2800 new lines of code, in addition to the 4000 which were already there! If there are any lingering bugs and they should be minor things which don't impact the operation of the rig. In any event, I've run out of time and what I got is what you'll get!

It's quite possible I'll start shipping kits as early as tomorrow. They won't all go out at once, as I can't tie up the PO all day! There'd be a line out the door behind me and a lot of unhappy people. They will go out 10-20 at a time as I can get them packaged up and labeled. So if anyone says "WOW I got mine" and you haven't, yours will get there eventually.

Okay, guess I better start burning CDs!

Steve KD1JV

1489. Search for builders

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-12 18:06:01 UTC
From: Paul
Topic: 1489 Message: 1489

Clint Eastwood once said, "...A man's got to know his limitations..." I recently tried to build a simple solar power regulator (about 10 parts) and needed a magnifier to read the standard resistors.

So,is there an acknowledged list of potential builders for the AT_Sprint? Or would the best way be to read past posts, see who have built several and inquire if they would like to build one more?

Does the Altoids tin give it mojo or is there another popular housing?
Thank you and 73,
Paul

1490. KX1 and ATS and Digital

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-12 18:12:16 UTC
From: Paul
Topic: 1490 Message: 1490

I did a search on KX1 first and didn't see too many "comparison" posts. But in general is seemed the KX1 had the convenience of band switching without switching cards and a visible readout, and SSB/AM general coverage-ish RX. The ATS had a better filter, lighter weight, more power per battery juice.

But now I've read that the ATS will do digital modes or mode = PSK31. Is that true - part of the design? If I have a small XP laptop, what would it take?
Thank you and 73,
Paul

1491. Re: [AT_Sprint] Search for builders

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-12 18:22:31 UTC
From: Mark Langenfeld
Topic: 1489 Message: 1491

>
> Does the Altoids tin give it mojo or is there another popular housing?
> Thank you and 73,
> Paul
>

While there are a number of other nice housing options, there's no question that an Altoids tin will make your sigs "curiously strong."

72,

Mark -- WA9ETW
--
CoreComm Webmail.
http://home.core.com

1492. Re: [AT_Sprint] KX1 and ATS and Digital

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-12 18:39:49 UTC
From: Karl Larsen
Topic: 1490 Message: 1492

Paul wrote:
> I did a search on KX1 first and didn't see too many "comparison" posts.
> But in general is seemed the KX1 had the convenience of band switching
> without switching cards and a visible readout, and SSB/AM general
> coverage-ish RX. The ATS had a better filter, lighter weight, more
> power per battery juice.
>
> But now I've read that the ATS will do digital modes or mode = PSK31.
> Is that true - part of the design? If I have a small XP laptop, what
> would it take?
> Thank you and 73,
> Paul
>
>
>
>
> Yahoo! Groups Links
>
>
>
>
>
>
Hi Paul, the ATS3B will do psk31 but it is just being shipped to the
first 100 buyers. My older plain ATS3 will not do digital and is in an
Altoids can and runs near 5 Watts on all bands.

So if you want the ATS3B send your money $190 to Steve ASAP so you
will get on the second 100 list...

--

Karl F. Larsen, AKA K5DI
Linux User
#450462 http://counter.li.org.

1493. Re: [AT_Sprint] KX1 and ATS and Digital

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-12 18:20:13 UTC
From: Vojtěch Bubník
Topic: 1490 Message: 1493

Hi Paul.

> But now I've read that the ATS will do digital modes or mode = PSK31.
> Is that true - part of the design? If I have a small XP laptop, what
> would it take?

You need only a simple interface cable and PocketDigi software
http://pocketdigi.sourceforge.net
You will be able to work BPSK31/63 modes, RTTY, MFSK16 and Olivia. All types of Olivia may be modulated, but the ATS-3 filter is narrow, so only 250 Hz wide submodes are possible to receive.

For details, look into ATS-3b manual, which is published in the files folder.
http://groups.yahoo.com/group/AT_Sprint/files/

73, Vojtech OK1IAK

1494. He He He....

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-12 20:39:34 UTC
From: Bruce Beford
Topic: 1494 Message: 1494

Postal Santa left a package today from Berlin NH......

-Bruce N1RX
(Newport NH)

1495. Re: [AT_Sprint] He He He....

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-12 20:44:18 UTC
From: John A. Evans - N0HJ
Topic: 1494 Message: 1495

You are so close, are you sure Steve didn't just throw it over the fence? ;)

72 - john - n0hj

Bruce Beford wrote:
>
> Postal Santa left a package today from Berlin NH......
>
> -Bruce N1RX
> (Newport NH)
>

1496. Re: [AT_Sprint] KX1 and ATS and Digital

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-12 21:21:03 UTC
From: john
Topic: 1490 Message: 1496

Actually, I think Steve mentioned NOT sending money until he opens the gate
for the second wave. The folks who sent money early the first time created
somewhat of a headache for him.

John K5MO

At 02:39 PM 9/12/2007, you wrote:
>Paul wrote:
> > I did a search on KX1 first and didn't see too many "comparison" posts.
> > But in general is seemed the KX1 had the convenience of band switching
> > without switching cards and a visible readout, and SSB/AM general
> > coverage-ish RX. The ATS had a better filter, lighter weight, more
> > power per battery juice.
> >
> > But now I've read that the ATS will do digital modes or mode = PSK31.
> > Is that true - part of the design? If I have a small XP laptop, what
> > would it take?
> > Thank you and 73,
> > Paul
> >
> >
> >
> >
> > Yahoo! Groups Links
> >
> >
> >
> >
> >
> >
> Hi Paul, the ATS3B will do psk31 but it is just being shipped to the
>first 100 buyers. My older plain ATS3 will not do digital and is in an
>Altoids can and runs near 5 Watts on all bands.
>
> So if you want the ATS3B send your money $190 to Steve ASAP so you
>will get on the second 100 list...
>
>
>
>--
>
> Karl F. Larsen, AKA K5DI
> Linux User
> #450462 http://counter.li.org.
>

>
>
>
>Yahoo! Groups Links
>
>
>

1497. OHR WM-2

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-12 22:22:46 UTC
From: Kurt Savegnago
Topic: 1490 Message: 1497

Hey can anyone help me with an OHR WM-2 meter? I
suspect
some of you out there have built one.

Is the braid on the cable that goes through the
toroids
only connected at one end though the hole that says
braid? I've seen the pictures on the
web now but now have to re-work mine. I soldered the
braids on both ends together. I'm no circuit person
but it doesn't make sense to me. If the pics were in
the instructions, I might not have botched it.

Kurt Savegnago
KC9LDH

First kit I've botched in a long time but at least I
know what to do to fix it.

Slackware user since 1994

1498. Re: OHR WM-2

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-12 22:36:41 UTC
From: Bruce Beford
Topic: 1490 Message: 1498

--- In AT_Sprint@yahoogroups.com, Kurt Savegnago <ksaves2@...> wrote:
>
> Is the braid on the cable that goes through the
> toroids
> only connected at one end though the hole that says
> braid?

Kurt-

Your suspicion is correct. Each piece of coax has their braid connected at only one end.

The coax closest to the rear(between points TERM1 and TERM2), and connected directly to the jacks, has it's braid connected in the left hole marked 'BRAID'. This hole is directly behind the solid wire jumper on the board.

The coax closest to the front (between the points TERM3 and TERM4) has it's braid connected only on the right hole marked BRAID.

In both cases, the opposite end of each coax braid is -not- connected to anything.

GL,
Bruce N1RX

1499. SMT tweezers?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-12 23:15:22 UTC
From: Tim
Topic: 1499 Message: 1499

Is there any particular type of tweezers I should have for the ATS project or will any old pair from the drug store do the trick?

Tnx.

Tim - KX3H - sitting by the mailbox

1500. Re: [AT_Sprint] SMT tweezers?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-12 23:27:29 UTC
From: Paul Beckmann
Topic: 1499 Message: 1500
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

1501. Re: He He He....

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-12 23:47:29 UTC
From: kd1jv
Topic: 1494 Message: 1501

>
> You are so close, are you sure Steve didn't just throw it over the
> fence?

Maybe if there was a strong breeze going in that direction!

Actually, you can't get there from here. Its a 3+ hour, round about
drive. PO does good to get it there in 24 hours!

Next batch of 30 or so go out tomorrow, soon as UPS brings me more 150p
caps. Seems I kinda ran out of them....

72, Steve KD1JV

1502. Re: OHR WM-2

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-12 23:52:03 UTC
From: kd1jv
Topic: 1490 Message: 1502

> Your suspicion is correct. Each piece of coax has their braid
> connected at only one end.
>
The braid acts as a fariday sheild, which is why its only grounded on one end. Its also suppost to reduce sensitivity to harmonics, which of course, you shouldn't have much of anyway!

Steve KD1JV

1503. Re: [AT_Sprint] SMT tweezers?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-12 23:57:27 UTC
From: John D'Ausilio
Topic: 1499 Message: 1503
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

1504. Re: [AT_Sprint] SMT tweezers?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-13 00:32:05 UTC
From: Gil Stacy
Topic: 1499 Message: 1504
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

1505. Re: [AT_Sprint] SMT tweezers?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-13 00:50:26 UTC
From: Michael Harnage
Topic: 1499 Message: 1505

I second that recommendation. :)

I'm lucky, there's a Harbor Freight down the street
from my house. My xyl may think otherwise.

-mike/w1mt

--- Gil Stacy <gilstacy@...> wrote:

> W1MT first recommended the Harbor Freight selection
> for under 10 bucks.
> There are six in the package and are of different
> designs. A real bargain
> and they work fine for smd work.
> 73, Gil NN4CW
>

Check out the hottest 2008 models today at Yahoo! Autos.
http://autos.yahoo.com/new_cars.html

1506. Re: [AT_Sprint] Re: OHR WM-2

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-13 02:28:37 UTC
From: Kurt Savegnago
Topic: 1490 Message: 1506

--- kd1jv <kd1jv@...> wrote:

> > Your suspicion is correct. Each piece of coax has
> their braid
> > connected at only one end.
> >
> The braid acts as a fariday sheild, which is why its
> only grounded on
> one end. Its also suppost to reduce sensitivity to
> harmonics, which of
> course, you shouldn't have much of anyway!
>
> Steve KD1JV

Thanks Steve,

Would it matter if I grounded the braid at both ends?
If it doesn't, I wouldn't bother clipping the one end
and recalibrating. I do have a small HF rig I could
plug into it and see what the power output is.
(I have a few others I need to build.) If it does
matter, I'll cut one, reinstall the test point jumper
and re-calibrate. Gosh I feel stupid.

I see some of my high powered amateur rocketry
brethren will put a wire mesh faraday cage around an
electronic deployment altimeter to shield it against
stray rf
that might cause the altimeter to fire ejection
charges at inappropriate times. This is done if a
high powered tracking transmitter shares the same
electronics bay.

Kurt Savegnago
KC9LDH

Slackware user since 1994

1507. Re: OHR WM-2

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-13 05:57:47 UTC
From: radio_kx0r
Topic: 1490 Message: 1507

--- In AT_Sprint@yahoogroups.com, Kurt Savegnago <ksaves2@...> wrote:
>
>
> --- kd1jv <kd1jv@...> wrote:
>
> > > Your suspicion is correct. Each piece of coax has
> > their braid
> > > connected at only one end.
> > >
> > The braid acts as a fariday sheild, which is why its
> > only grounded on
> > one end. Its also suppost to reduce sensitivity to
> > harmonics, which of
> > course, you shouldn't have much of anyway!
> >
> > Steve KD1JV
>
> Thanks Steve,
>
> Would it matter if I grounded the braid at both ends?
> If it doesn't, I wouldn't bother clipping the one end
> and recalibrating. I do have a small HF rig I could
> plug into it and see what the power output is.
> (I have a few others I need to build.) If it does
> matter, I'll cut one, reinstall the test point jumper
> and re-calibrate. Gosh I feel stupid.
>
> I see some of my high powered amateur rocketry
> brethren will put a wire mesh faraday cage around an
> electronic deployment altimeter to shield it against
> stray rf
> that might cause the altimeter to fire ejection
> charges at inappropriate times. This is done if a
> high powered tracking transmitter shares the same
> electronics bay.
>
> Kurt Savegnago
> KC9LDH
>
> Slackware user since 1994
>
Kurt,

If both ends of the shield braid(s)are grounded, then it really does
act as a shield, so the magnetic field will not couple to the winding

(s)on the toroids; this means the wattmeter won't work right. Steve said it exactly right - if the shield is grounded at one end only, it acts as a Faraday shield, which means it reduces capacitive coupling while still allowing magnetic coupling. The WM-2 is a nice tool, and you'll enjoy using it if you can duplicate the directional couplers as they are intended to be built. Please consider using new coax to rebuild them - don't try to re-use the old melted coax. These coax lines are the very heart of the bridge, and they need to be symmetric and 50 ohms for the instrument to work as designed.

Of course you could also build one of Steve's QBSA units - it too has a clever directional wattmeter and works nicely!

George Carey Fuller
KX0R

1508. QBSA and ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-13 06:07:30 UTC
From: radio_kx0r
Topic: 1508 Message: 1508

Steve,

Will my QBSA work with the new ATS-3B? (I just realized we haven't asked about this, or else I missed it.) I assume most of it would work, but there could be a few issues related to the new bands or maybe something else.

Probably the wattmeter will be OK at 21 Mhz or even higher. I wonder if the frequency counter will work OK with the new LO frequencies? It looks like the same mod to get the LO out to the QBSA will be required.

Please comment when convenient if you have tried the ATS-3B on the QBSA yet - I know you're busy making and sending kits...

Thanks!

George Carey Fuller
KX0R

1509. Re: Search for builders

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-13 12:54:11 UTC
From: fixnwrtr
Topic: 1489 Message: 1509

I wrote an article about other enclosures for our local ham radio club newsletter. You can download it at: http://ppraa.org/downloads.php
Look for the September issue for mojo housing.

73 as always...

Jackie AC0CA

--- In AT_Sprint@yahoogroups.com, "Paul" <k7nhb@...> wrote:
>
> Clint Eastwood once said, "...A man's got to know his limitations..." I recently tried to build a simple solar power regulator (about 10 parts) and needed a magnifier to read the standard resistors.
>
> So,is there an acknowledged list of potential builders for the
> AT_Sprint? Or would the best way be to read past posts, see who have
> built several and inquire if they would like to build one more?
>
> Does the Altoids tin give it mojo or is there another popular housing?
> Thank you and 73,
> Paul
>

1510. Re: [AT_Sprint] Re: OHR WM-2

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-13 14:22:42 UTC
From: Kurt Savegnago
Topic: 1490 Message: 1510

Thanks all for the info. I believe I will be able to clip the offending end, repair the test jumper and recalibrate. I see now I missed some key points in the written instructions in that step. Still would have been nice if the photo of the completed board would have been in the instructions instead of having to go hunt it up on the web. I would have caught it.

One more "use" question that I couldn't find an answer for. If I calibrate the meter for battery use, will it need to re-calibrated if I were to use it on external power? If so, I might best be served to wire a switch into the calibration jumper that one cuts after calibration? Then I could recalibrate more easily?

Kurt Savegnago
KC9LDH

Slackware user since 1994

1511. Re: Search for builders

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-13 17:21:31 UTC
From: Jim Fraser
Topic: 1489 Message: 1511

So you don't have to search like I did, Jackie is referencing the
September 2006 newsletter, not 2007.

Jim K6JF

--- In AT_Sprint@yahoogroups.com, "fixnwrtr" <jcornwell@...> wrote:
>
> I wrote an article about other enclosures for our local ham radio
club
> newsletter. You can download it at: http://ppraa.org/downloads.php
> Look for the September issue for mojo housing.
>
> 73 as always...
>
> Jackie AC0CA
>
>
>
> --- In AT_Sprint@yahoogroups.com, "Paul" <k7nhb@> wrote:
> >
> > Clint Eastwood once said, "...A man's got to know his
> limitations..." I recently tried to build a simple solar power
> regulator (about 10 parts) and needed a magnifier to read the
standard
> resistors.
> >
> > So,is there an acknowledged list of potential builders for the
> > AT_Sprint? Or would the best way be to read past posts, see who
have
> > built several and inquire if they would like to build one more?
> >
> > Does the Altoids tin give it mojo or is there another popular
housing?
> > Thank you and 73,
> > Paul
> >
>

1512. Re: OHR WM-2

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-13 17:51:51 UTC
From: radio_kx0r
Topic: 1490 Message: 1512

--- In AT_Sprint@yahoogroups.com, Kurt Savegnago <ksaves2@...> wrote:
>
>
> Thanks all for the info. I believe I will be able to
> clip the offending end, repair the test jumper and
> recalibrate. I see now I missed some key points in
> the written instructions in that step. Still would
> have been nice if the photo of the completed board
> would have been in the instructions instead of having
> to go hunt it up on the web. I would have caught it.
>
> One more "use" question that I couldn't find an answer
> for. If I calibrate the meter for battery use, will
> it need to re-calibrated if I were to use it
> on external power? If so, I might best be served to
> wire a switch into the calibration jumper that one
> cuts after calibration? Then I could recalibrate more
> easily?
>
> Kurt Savegnago
> KC9LDH
>
> Slackware user since 1994
>
Kurt,

I just had a look at my WM-2 manual, and I think I can answer your questions. The calibration jumper is used to create some DC reference voltages that are used only during calibration. After that, the jumper is cut, since those DC voltages are not used in regular operation. The only reason for the cal voltages is to set up some gain pots for the various RF power ranges.

During calibration, the DC reference voltages ARE sensitive to the power supply voltage, whether it's from a battery or an external DC supply. There's no internal regulator in the WM-2. So you must use the same supply until you're through calibrating. Use a fresh 9V battery and you'll be fine; or use a regulated external supply - leave it set to the same voltage until you're through with the cal.

After you cut the cal jumper and use the unit for normal operation, the DC supply, whether battery or external, is only used to power two op amps; these op amps, by their design, are relatively insensitive to their supply voltage. So your RF readings will not be affected significantly, whether you run on the internal battery or an external supply. Only one calibration is needed. This is one of the nice

features of this wattmeter.

However, if you like to fiddle and tweak, you may eventually want to go back in and recalibrate some day...maybe you'll do what I did, and check your WM-2 against other measurements or instruments and discover errors, so then you might want to recalibrate. You really might want a switch in place of the calibration jumper.

Measuring RF power accurately is difficult with inexpensive test gear. The WM-2 does a good job, and its accuracy is adequate for QRP testing and experimenting. The large analog meter is convenient. However, the various scales of mine don't track perfectly from one to the next, revealing errors.

Around 50 Mhz this unit is struggling with respect to several parameters, although it may still be useful up there if you know its limitations. I checked mine with a MFJ-259B antenna analyzer and found that the WM-2 has an SWR of 1.0 from 1.8-25 Mhz, 1.1 from about 26-43 Mhz, and 1.2 up through about 60 Mhz. It gets worse as you go up from there. My short cable and test load measure an SWR of 1.0 beyond 100 Mhz, so I'm sure that the WM-2 is causing the impedance bump. Through 10 meters it will do a great job for amateur work, but it's not accurate enough to set up a 6 meter beam, for example. Use an antenna analyzer for that kind of work.

One of the checks for your WM-2 is to hook it up backwards and measure power in the reverse direction. This serves as a symmetry check for the sampling RF transformers. If you don't get good nulls both ways along with nearly identical power readings, you have some difference in the two couplers and their circuitry.

I think you'll like your WM-2 (I like mine) - I recommend it to anyone with the remark that although it's not a precision device, it allows us to make useful measurements and comparisons of our QRP equipment. If you need to peak up a QRP final, or adjust an output filter on an ATS rig, this is the meter you want.

Happy Tweaking!

George Carey Fuller
KX0R

1513. Re: [AT_Sprint] Re: OHR WM-2

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-13 18:34:25 UTC
From: Kurt Savegnago
Topic: 1490 Message: 1513

-
> Kurt,
>
> I just had a look at my WM-2 manual, and I think I
> can answer your
> questions. The calibration jumper is used to create
> some DC
> reference voltages that are used only during
> calibration. After
> that, the jumper is cut, since those DC voltages are
> not used in
> regular operation. The only reason for the cal
> voltages is to set up
> some gain pots for the various RF power ranges.
>
> During calibration, the DC reference voltages ARE
> sensitive to the
> power supply voltage, whether it's from a battery or
> an external DC
> supply. There's no internal regulator in the WM-2.
> So you must use
> the same supply until you're through calibrating.
> Use a fresh 9V
> battery and you'll be fine; or use a regulated
> external supply -
> leave it set to the same voltage until you're
> through with the cal.
>
> After you cut the cal jumper and use the unit for
> normal operation,
> the DC supply, whether battery or external, is only
> used to power two
> op amps; these op amps, by their design, are
> relatively insensitive
> to their supply voltage. So your RF readings will
> not be affected
> significantly, whether you run on the internal
> battery or an external
> supply. Only one calibration is needed. This is
> one of the nice
> features of this wattmeter.
>
> However, if you like to fiddle and tweak, you may
> eventually want to
> go back in and recalibrate some day...maybe you'll

> do what I did, and
> check your WM-2 against other measurements or
> instruments and
> discover errors, so then you might want to
> recalibrate. You really
> might want a switch in place of the calibration
> jumper.
>
> Measuring RF power accurately is difficult with
> inexpensive test
> gear. The WM-2 does a good job, and its accuracy is
> adequate for QRP
> testing and experimenting. The large analog meter
> is convenient.
> However, the various scales of mine don't track
> perfectly from one to
> the next, revealing errors.
>
> Around 50 Mhz this unit is struggling with respect
> to several
> parameters, although it may still be useful up there
> if you know its
> limitations. I checked mine with a MFJ-259B antenna
> analyzer and
> found that the WM-2 has an SWR of 1.0 from 1.8-25
> Mhz, 1.1 from about
> 26-43 Mhz, and 1.2 up through about 60 Mhz. It gets
> worse as you go
> up from there. My short cable and test load measure
> an SWR of 1.0
> beyond 100 Mhz, so I'm sure that the WM-2 is causing
> the impedance
> bump. Through 10 meters it will do a great job for
> amateur work, but
> it's not accurate enough to set up a 6 meter beam,
> for example. Use
> an antenna analyzer for that kind of work.
>
> One of the checks for your WM-2 is to hook it up
> backwards and
> measure power in the reverse direction. This serves
> as a symmetry
> check for the sampling RF transformers. If you
> don't get good nulls
> both ways along with nearly identical power
> readings, you have some
> difference in the two couplers and their circuitry.
>
> I think you'll like your WM-2 (I like mine) - I
> recommend it to

> anyone with the remark that although it's not a
> precision device, it
> allows us to make useful measurements and
> comparisons of our QRP
> equipment. If you need to peak up a QRP final, or
> adjust an output
> filter on an ATS rig, this is the meter you want.
>
> Happy Tweaking!
>
> George Carey Fuller
> KX0R

Yeeeehaaaa George,

Thanks, that's about all the information I (a neophyte) or any other interested party would need to understand the WM-2.

Best regards,
Kurt Savegnago
KC9LDH
meter

1514. Re: [AT_Sprint] Re: Search for builders

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-13 18:57:48 UTC
From: Karl Larsen
Topic: 1489 Message: 1514

Jim Fraser wrote:
> So you don't have to search like I did, Jackie is referencing the
> September 2006 newsletter, not 2007.
>
> Jim K6JF
>
> --- In AT_Sprint@yahoogroups.com, "fixnwrtr" <jcornwell@...> wrote:
>
>> I wrote an article about other enclosures for our local ham radio
>>
> club
>
>> newsletter. You can download it at: http://ppraa.org/downloads.php
>> Look for the September issue for mojo housing.
>>
>> 73 as always...
>>
>> Jackie AC0CA
>>
>>
>>
>> --- In AT_Sprint@yahoogroups.com, "Paul" <k7nhb@> wrote:
>>
>>> Clint Eastwood once said, "...A man's got to know his
>>>
>> limitations..." I recently tried to build a simple solar power
>> regulator (about 10 parts) and needed a magnifier to read the
>>
> standard
>
>> resistors.
>>
>>> So,is there an acknowledged list of potential builders for the
>>> AT_Sprint? Or would the best way be to read past posts, see who
>>>
> have
>
>>> built several and inquire if they would like to build one more?
>>>
>>> Does the Altoids tin give it mojo or is there another popular
>>>
> housing?
>
>>> Thank you and 73,
>>> Paul

>>>
>>>
Paul I was the first to order the ATS3B kit from Steve but then
about a month later my hands got a bad jitter. Went to my Doctor and he
was no help. Another Doctor now has me on med's and it seems to be
working. So I turned off my order. I think it was the best move.

So be careful who you tap.

>
>
>
>
>
> Yahoo! Groups Links
>
>
>
>
>
>

--

Karl F. Larsen, AKA K5DI
Linux User
#450462 http://counter.li.org.

1515. Re: [AT_Sprint] QBSA and ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-13 21:54:11 UTC
From: Steven Weber
Topic: 1508 Message: 1515

>Will my QBSA work with the new ATS-3B? (I just realized we haven't
>asked about this, or else I missed it.) I assume most of it would
>work, but there could be a few issues related to the new bands or maybe
>something else.
>

It should. In thoery the counter is good to about 45 MHz and I got a report
from a builder who said he tested the watt meter up to 6 meters and it was
still accurate.

BTW, I only have about 30 of these left.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

1516. Re: [AT_Sprint] QBSA and ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-13 23:50:56 UTC
From: Michael Harnage
Topic: 1508 Message: 1516

Will you be able to reprogram these to handle the
extra bands of the 3B? Would they still be backward
compatible with the previous versions?

--- Steven Weber <kd1jv@...> wrote:

> >Will my QBSA work with the new ATS-3B? (I just
> realized we haven't
> >asked about this, or else I missed it.) I assume
> most of it would
> >work, but there could be a few issues related to
> the new bands or maybe
> >something else.
> >
>
> It should. In thoery the counter is good to about 45
> MHz and I got a report
> from a builder who said he tested the watt meter up
> to 6 meters and it was
> still accurate.
>
> BTW, I only have about 30 of these left.
>
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com
>
>
>
> Yahoo! Groups Links
>
>
>
>
>

Yahoo! oneSearch: Finally, mobile search
that gives answers, not web links.
http://mobile.yahoo.com/mobileweb/onesearch?refer=1ONXIC

1517. Audio Spectrum analyzer program

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-14 02:05:34 UTC
From: kd1jv
Topic: 1517 Message: 1517

I found this link on the NEQRP page http://www.hotamatuerprograms.com

There's a bunch of sound card programs there, I tried out the audio spectrum analyzer/audio signal generator. Its a bit strange in how it works, but looks like it would do the trick for peaking up the ATS-3B if you don't have a scope. Its a fairly small down load. Just be sure to unzip the files into a folder you can actually find later!

72, Steve KD1JV

1518. Re: QBSA and ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-14 02:17:36 UTC
From: kd1jv
Topic: 1508 Message: 1518

>
> Will you be able to reprogram these to handle the
> extra bands of the 3B? Would they still be backward
> compatible with the previous versions?
>
Don't need to. All the higher bands are low side injection, just like all the others but 80, which is the special case. The IF frequency is the aame as before so it will work just fine as is.

The only thing I'm not 100% sure of is if the counter input will be sensitive enough at the higher frequencies. I made a mistake on the board layout and placed the inductor which is in series with the (Q2 if I remeber right) collector resistor on the supply side of the resistor instead of the collector side. The inductor was suppost to make the transistor have more gain at higher frequencies, but doesn't do much where it is now. One could always swap the inductor and resistor, but they are different sizes so don't fit the pads very well or I would have had you all do it that way before.

72, Steve KD1JV

1519. Re: [AT_Sprint] Audio Spectrum analyzer program

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-14 02:10:46 UTC
From: k4bev@aol.com
Topic: 1517 Message: 1519

In a message dated 9/13/2007 9:08:35 PM Central Daylight Time,
kd1jv@... writes:

I found this link on the NEQRP page _http://www.hotamatuhttp://www.htt_
(http://www.hotamatuerprograms.com)

The link doesn't work here...
Says page cannot be found.

73, K4BEV

********** See what's new at http://www.aol.com

1520. Re: [AT_Sprint] Audio Spectrum analyzer program

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-14 02:22:46 UTC
From: John A. Evans - N0HJ
Topic: 1517 Message: 1520

just spell amateur correctly and it will work -
http://www.hotamateurprograms.com/

72 - john - n0hj

k4bev@... wrote:
>
> In a message dated 9/13/2007 9:08:35 PM Central Daylight Time,
> kd1jv@... writes:
>
> I found this link on the NEQRP page
> http://www.hotamatuerprograms.com <http://www.hotamatuerprograms.com>
>
>
> The link doesn't work here...
> Says page cannot be found.
>
> 73, K4BEV

1521. Re: [AT_Sprint] Audio Spectrum analyzer program

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-14 02:31:31 UTC
From: David D. Meacham
Topic: 1517 Message: 1521

The problem is just a spelling error in the link. A portion of "amateur" is spelled wrong...uer...instead of ...eur. Transpose the "uer" and it works!
72, Dave, W6EMD

1522. Re: Search for builders

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-15 01:22:29 UTC
From: Paul
Topic: 1489 Message: 1522

Karl,
Does the second doctor build AT_Sprint kits?
73,
Paul

> Paul I was the first to order the ATS3B kit from Steve but then
> about a month later my hands got a bad jitter. Went to my Doctor and he
> was no help. Another Doctor now has me on med's and it seems to be
> working. So I turned off my order. I think it was the best move.
>
> So be careful who you tap.
>
>
> Karl F. Larsen, AKA K5DI
> Linux User
> #450462 http://counter.li.org.
>

1523. Re: [AT_Sprint] Re: Search for builders

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-15 01:30:10 UTC
From: Karl Larsen
Topic: 1489 Message: 1523

Paul wrote:
> Karl,
> Does the second doctor build AT_Sprint kits?
> 73,
> Paul
>
Heck no, he isn't a Ham and so no.
>
>
>> Paul I was the first to order the ATS3B kit from Steve but then
>> about a month later my hands got a bad jitter. Went to my Doctor and he
>> was no help. Another Doctor now has me on med's and it seems to be
>> working. So I turned off my order. I think it was the best move.
>>
>> So be careful who you tap.
>>
>>
>> Karl F. Larsen, AKA K5DI
>> Linux User
>> #450462 http://counter.li.org.
>>
>>
>
>
>
>
>
> Yahoo! Groups Links
>
>
>
>
>
>
>

--

Karl F. Larsen, AKA K5DI
Linux User
#450462 http://counter.li.org.

1524. 603 parts are small

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-15 16:56:02 UTC
From: w1mt
Topic: 1524 Message: 1524

Put all the smd parts on my 3b this am. Those 603 resistors sure are small! Bout 2 hours with hot air method. Had a few bridges on the dds but easily fixed. On to the toroids.

-mike/w1mt

1525. Re: [AT_Sprint] 603 parts are small

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-15 17:41:59 UTC
From: Gil Stacy
Topic: 1524 Message: 1525
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

1526. Re: 603 parts are small

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-15 17:46:01 UTC
From: Dave
Topic: 1524 Message: 1526

> Put all the smd parts on my 3b this am.

Mike, I figured it wouldn't take you long to get the thing assembled.

Beware that the ATS-3A board is a slightly different size than the ATS-3A board and will not fit in a box drilled for the ATS-3A. (I can't use my old carbon-fiber box unless I replace one side panel and move two board mounting screws.

After doing three cases for the ATS-3A and getting none exactly right, I decided that the bare board is the best template for hole placement. I spent the morning rounding the board's corners and marking and drilling an Altoids tin. I snapped the power connector into the board so that I could get the board positioned with the end of the power connector flush with the inside of the case.

Dave, WA3OFF

1527. Need updated schematics in the 3B manual

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-15 17:58:39 UTC
From: Dave
Topic: 1527 Message: 1527

At a minimum, many of the capacitor reference designators need to be updated. The numbering of them on the ATS-3B schematic mostly matches the ATS-3A instead. I haven't looked closely at the other parts yet.

It might also be worth fixing U5's pin numbering to match the part's data sheet, but this could create some confusion since it's also this way on the ATS-3A schematic.

Dave, WA3OFF

1528. Re: [AT_Sprint] Need updated schematics in the 3B manual

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-15 18:52:51 UTC
From: Kurt Savegnago
Topic: 1527 Message: 1528

--- Dave <dmertz@...> wrote:

> At a minimum, many of the capacitor reference
> designators need to be
> updated. The numbering of them on the ATS-3B
> schematic mostly
> matches the ATS-3A instead. I haven't looked
> closely at the other
> parts yet.
>
> It might also be worth fixing U5's pin numbering to
> match the part's
> data sheet, but this could create some confusion
> since it's also
> this way on the ATS-3A schematic.
>
> Dave, WA3OFF

Hope it's fixed in an instructions update. Told Steve
I'm in no hurry to receive my kit and can put it on
the bottom. Want to see what the more experienced
folks find out first.

Kurt
KC9LDH

Slackware user since 1994

1529. Error in the 3B construction manual

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-15 19:30:52 UTC
From: n3hu
Topic: 1529 Message: 1529

Finished the resistors today on the
ATS-3B. I believe that there is a missing
resistor in the table on page 16.

R44(223) is shown on the photo and
in the schematic but is missing from
the table listing.

rob
n3hu

1530. Re: [AT_Sprint] 603 parts are small

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-15 22:02:05 UTC
From: Michael Harnage
Topic: 1524 Message: 1530

Gil,

LOL. No thumbnails were harmed in the making of my
3b. I've got plenty of solder paste and use the hot
air method. Mucho easier and quicker. :)

I hear an 8 in the headphones and see freq numbers on
the display. YEA!

-mike/w1mt

--- Gil Stacy <gilstacy@...> wrote:

> Mike,
> You still holding parts down with your thumbnail?
> ;) If so, that's what I
> call grizzled (sizzled)!!
> 73 Gil NN4CW.
>

_____
Looking for a deal? Find great prices on flights and hotels with Yahoo! FareChase.
http://farechase.yahoo.com/

1531. Re: [AT_Sprint] 603 parts are small

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-15 22:56:24 UTC
From: mbhayden
Topic: 1524 Message: 1531
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

1532. Re: [AT_Sprint] 603 parts are small

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-15 23:28:38 UTC
From: Gil Stacy
Topic: 1524 Message: 1532
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

1533. Re: [AT_Sprint] 603 parts are small

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-15 23:57:02 UTC
From: john
Topic: 1524 Message: 1533

Where can one buy small qtys of paste?

John K5MO

At 07:28 PM 9/15/2007, Gil Stacy wrote:

>The hot air techique is very cost effective. Using Cash Olson's solder
>paste, a hot plate or stove top, and a cheap embossing gun, it is a very
>cheap effective method to use. Here's what you need:
><http://www.zianet.com/erg/SMT_Soldering.html>http://www.zianet.com/erg/SMT_Soldering.htm
l
>73 Gil NN4CW
>

1534. Re: [AT_Sprint] 603 parts are small

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-16 00:12:06 UTC
From: Gil Stacy
Topic: 1524 Message: 1534
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

1535. New file uploaded to AT_Sprint

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-16 00:27:45 UTC
From: AT_Sprint@yahoogroups.com
Topic: 154 Message: 1535

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the AT_Sprint
group.

File : /corrected ATS-3B schematics.pdf
Uploaded by : kd1jv <kd1jv@...>
Description : componet designations fixed to match board

You can access this file at the URL:
http://groups.yahoo.com/group/AT_Sprint/files/corrected%20ATS-3B%20schematics.pdf

To learn more about file sharing for your group, please visit:
http://help.yahoo.com/help/us/groups/files

Regards,

kd1jv <kd1jv@...>

1536. fixed schematics

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-16 00:34:11 UTC
From: kd1jv
Topic: 1536 Message: 1536

Sorry about that guys. Apparently I forgot the go and renumber the caps on the schematics after fiddling with the board. I got most of the resistors right :-) I noticed a couple of other things while I was checking, like no pull up resistors on the paddle inputs and no by-pass cap on the band select voltage input. Minor details that I hope are all squared away now.

72, Steve KD1JV

1537. Re: 603 parts are small

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-16 00:41:10 UTC
From: kd1jv
Topic: 1524 Message: 1537

> Beware that the ATS-3A board is a slightly different size than the
> ATS-3A board and will not fit in a box drilled for the ATS-3A. (I

Yeah, I had to make the board a tad larger to accomidate the bigger
MPU, display and new mounting stand offs.

And say, if anyone comes up with some neat graphics for the front
panel, up load it to the files section, eh?

KD1JV

1538. Re: 603 parts are small

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-16 01:52:34 UTC
From: Dave
Topic: 1524 Message: 1538

--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:
> I hear an 8 in the headphones and see freq numbers on
> the display. YEA!

I'm catching up to you. I'm at the same point. Took about 2.25 hours to get all of the SMT stuff on by hand. Some of that time included spending 5 minutes getting the display positioned just right. The pad spacing on the board was slightly off, so I wanted to make sure I had the display centered to avoid any chance of a short. Another hour or so to get the through-hole stuff mounted.

Also spent a bunch more time on the tin getting the holes exactly right (fourth time is a charm). Just need to enlarge the holes for the phone and paddle jacks and then make the hole for an SMA connector.

No band modules yet, but I stuck a wire on C1 and do hear a change in the noise, so at least something is propagating all the way through. I'm going to build 40M next and hopefully will be using the ATS-3B instead of the 3A for the Run for the Bacon tomorrow.

Dave, WA3OFF

1539. Some minor build-note comments

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-16 02:06:51 UTC
From: Dave
Topic: 1539 Message: 1539

Steven, thanks for the updated schematics. Now I have a few comments
on the build notes:

Page 15 - On the board map, R8 should be 1133, not 1132.
Page 16 - R44, 22K, needs to be added to the table.
Page 16 - Indicate that there are only one of each of the leftovers.
Page 17 - Add D2 and Q6 to list of items to be installed on Front.

Note that there are two items identified as U11, the oscillator on
the Front Side and the reset chip on the Back Side.

Dave, WA3OFF

1540. Re: [AT_Sprint] fixed schematics

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-16 07:39:37 UTC
From: w9ya@qrparci.net
Topic: 1536 Message: 1540

> Sorry about that guys. Apparently I forgot the go and renumber the caps
> on the schematics after fiddling with the board. I got most of the
> resistors right :-) I noticed a couple of other things while I was
> checking, like no pull up resistors on the paddle inputs and no by-pass
> cap on the band select voltage input. Minor details that I hope are all
> squared away now.
>
> 72, Steve KD1JV

Hey Steve and the gang;

Thanks for taking the time to correct some stuff. It definitely helps. And appologies for making 'misteaks' is nice, but as far as I am concerned not needed. (i.e. I make all kinds of 'misteaks' with complete regularity. And if you doubt my sincerity about this, just ask my wife how many 'misteaks' I make. I am pretty sure she would be more than thrilled to tell you guys all about it.)

Um, one additional thing I did noticed on the pdf download...it says it is for the ats3A on the second page.

OOPPS... (that's just like the kind of 'misteaks' I make...)

Hey I gotta run, I think I hear my xyl calling me about something I messed up again.....

Vy 72;

Bob
w9ya

Liviu Librescu - ?n veci pomenirea lui.
(May his memory be eternal.)

1541. Re: [AT_Sprint] ATS-3B goes DIGITAL!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-16 12:29:11 UTC
From: W3JDR
Topic: 1439 Message: 1541

Has anyone measured the transmitted IMD for this mod?

Joe
W3JDR

----- Original Message -----
From: kd1jv
To: AT_Sprint@yahoogroups.com
Sent: Monday, August 27, 2007 9:43 PM
Subject: [AT_Sprint] ATS-3B goes DIGITAL!

Well, it always was sorta digital, with the uP, DDS and all, but now it will talk digital! (though strickly speaking, CW is a digital mode, just the oldest)

Many thanks to OK1IAK who wrote the digital modulation and sound card communications interface which made it all possible. I would have though it wasn't. Glad I was proven wrong.

It took me awhile to get what Vojtech wrote for the 3A to work in the 3B, but it finally does! I can copy myself sending PSK31, BPSK63, RTTY, MFSK16 and even CW sent from the keyboard of the PDA. It doesn't seem to like sending QPSK31 for some reason, but no one uses that mode anyway, so who cares? There are several other digital modes available, but I don't have the software to receive them. Vojtech says they work. He's also working on adding more modes too. Amazing.

Of course, these modes will only work with the Pocketdigi software. Any other digital mode software doesn't have the unique sound card control communications needed in them. Those programs are ment to be used with generic SSB rigs and we're special.

To top it off, I added a reverse paddle sense for you left handed ops and implemented the "stealth paddle" which enables using the tune up and tune down switches instead of an external paddle. Though using the switches isn't the easiest way to send Morse and will take some practice to get used to, it does work.

Whew, glad thats all done. Maybe I can get to bed a little earlier now. Though there is the manual to finish and parts to be sorted and bagged.

1542. Re: QBSA and ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-16 13:14:57 UTC
From: jerry
Topic: 1508 Message: 1542

hi Steve,

so.., may not be needed but, the optimal configuration would be to
physically switch L1 and R18 on the board so that they would then
actually match what is on the schematic.

am i correct about switching L1 and R18?

tnx
jerry aa1of

--- In AT_Sprint@yahoogroups.com, "kd1jv" <kd1jv@...> wrote:

> The only thing I'm not 100% sure of is if the counter input will be
> sensitive enough at the higher frequencies. I made a mistake on the
> board layout and placed the inductor which is in series with the (Q2
> if I remeber right) collector resistor on the supply side of the
> resistor instead of the collector side. The inductor was suppost to
> make the transistor have more gain at higher frequencies, but doesn't
> do much where it is now. One could always swap the inductor and
> resistor, but they are different sizes so don't fit the pads very
> well or I would have had you all do it that way before.
>
> 72, Steve KD1JV
>

1543. Re: [AT_Sprint] 603 parts are small

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-16 18:35:51 UTC
From: Michael Harnage
Topic: 1524 Message: 1543

Embossing guns. I got mine from Michael Crafts
locally. for between $20 and $30. Sales are your
friend but I wanted one quicker so paid a little much
for it but it's still a good price. Hobby Lobby has
them on sale for $10 or less sometimes.

-mike/w1mt

--- mbhayden <mbhayden@...> wrote:

> i'm waiting for my 3B, and wonder if there is a
> reasonably economic solution
> for a hot air iron.

Yahoo! oneSearch: Finally, mobile search
that gives answers, not web links.
http://mobile.yahoo.com/mobileweb/onesearch?refer=1ONXIC

1544. Re: [AT_Sprint] 603 parts are small

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-16 19:56:25 UTC
From: john
Topic: 1524 Message: 1544

Anyone tried the hot air guns from Harbor Freight?

John

At 02:35 PM 9/16/2007, Michael Harnage wrote:
>Embossing guns. I got mine from Michael Crafts
>locally. for between $20 and $30. Sales are your
>friend but I wanted one quicker so paid a little much
>for it but it's still a good price. Hobby Lobby has
>them on sale for $10 or less sometimes.
>
>-mike/w1mt
>
>--- mbhayden <mbhayden@...> wrote:
>
>
> > i'm waiting for my 3B, and wonder if there is a
> > reasonably economic solution
> > for a hot air iron.
>
>
>
>_____
>Yahoo! oneSearch: Finally, mobile search
>that gives answers, not web links.
>http://mobile.yahoo.com/mobileweb/onesearch?refer=1ONXIC
>
>
>
>Yahoo! Groups Links
>
>
>

1545. Re: [AT_Sprint] 603 parts are small

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-16 19:37:22 UTC
From: Karl Larsen
Topic: 1524 Message: 1545

Michael Harnage wrote:
> Embossing guns. I got mine from Michael Crafts
> locally. for between $20 and $30. Sales are your
> friend but I wanted one quicker so paid a little much
> for it but it's still a good price. Hobby Lobby has
> them on sale for $10 or less sometimes.
>
> -mike/w1mt
>
> --- mbhayden <mbhayden@...> wrote:
>
>
>
>> i'm waiting for my 3B, and wonder if there is a
>> reasonably economic solution
>> for a hot air iron.
>>
>
>
>
> _____
> Yahoo! oneSearch: Finally, mobile search
> that gives answers, not web links.
> http://mobile.yahoo.com/mobileweb/onesearch?refer=1ONXIC
>
>
>
> Yahoo! Groups Links
>
>
>
>
>
>
Mike is your embossing tool Pink? I was told at Hobby Lobby the one
I got for $10.00 was at half price because it is Pink.

It looks as though I will be using mine next week. I hope I can get
the parts stuck close to right in the solder paste. Old age is getting
to be a problem. But it beats the other.

--

Karl F. Larsen, AKA K5DI
Linux User
#450462 http://counter.li.org.

1546. Re: Some minor build-note comments

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-16 21:34:33 UTC
From: Dave
Topic: 1539 Message: 1546

A few more items:

Page 14 - Parts list - Should be ZXCT1008F, not ZXCT7008F.
Page 20 - L3 - 6" of wire, not 6'.

Dave, WA3OFF

1547. Re: [AT_Sprint] Re: QBSA and ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-16 21:30:43 UTC
From: Steven Weber
Topic: 1508 Message: 1547

>so.., may not be needed but, the optimal configuration would be to
>physically switch L1 and R18 on the board so that they would then
>actually match what is on the schematic.
>
>am i correct about switching L1 and R18?

Yes, that would be the idea solution.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

1548. ATS-3B working nicely

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-16 22:11:39 UTC
From: Dave
Topic: 1548 Message: 1548

My ATS-3B is up and running on 40M. Not quite as much output power as my ATS-3A, but it seems to be running about the same as the 3A did before tweaking its filters.

One thing to watch for: You might trip the 3B's overcurrent protection if you try to run on a 3-cell LiPo and the antenna is not properly tuned. I have to use my 2-cell LiPo for tune-up before switching to the 3-cell.

Dave, WA3OFF

1549. Run for the Bacon, 9/16/2007, 6:00 pm

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-17 01:22:22 UTC
From: AT_Sprint@yahoogroups.com
Topic: 1549 Message: 1549

Reminder from: AT_Sprint Yahoo! Group
http://groups.yahoo.com/group/AT_Sprint/cal

Run for the Bacon
Sunday September 16, 2007
6:00 pm - 8:00 pm
(This event repeats every month on the third Sunday.)
Location: Your shack or anywhere

Notes:
This Sunday evening, the Flying Pigs Amateur Radio Club International will be holding its monthly Run For The Bacon. This is a friendly, two hour QRP CW Sprint, which is open to ALL radio amateurs, will last from 9:00 - 11:00PM EDT (0200-0400 UTC Monday).

You may work stations once per band on 160, 80, 40, 20, 15 or 10 Meters. Suggested starting frequencies are 1.812, 3.562, 7.044, 14.062, 21.062, and 28.062 MHz.

The exchange is RST, S/P/C (State, Province, Country) and Flying Pigs membership number. If you're not a member of the Flying Pigs, and would like to be; then please cli

All Rights Reserved
Copyright ? 2007
Yahoo! Inc.
http://www.yahoo.com

Privacy Policy:
http://privacy.yahoo.com/privacy/us

Terms of Service:
http://docs.yahoo.com/info/terms/

1550. Re: Some minor build-note comments

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-17 01:58:14 UTC
From: kd1jv
Topic: 1539 Message: 1550

>
> Page 14 - Parts list - Should be ZXCT1008F, not ZXCT7008F.
> Page 20 - L3 - 6" of wire, not 6'.
>
> Dave, WA3OFF

Thanks Dave, your corrections have been noted and much apprechiated.
The shift key on this keyboard doesn't work all the time unless I
really push on it and sometimes I don't notice. Hence the ' instead
of ". As for the others, I'll blame that on working long hours, late at
night, hi.

Steve KD1JV

1551. Re: [AT_Sprint] ATS-3B working nicely

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-17 02:30:08 UTC
From: Tiana Hall
Topic: 1548 Message: 1551

Congratulations,
I can't believe how fast y'all are getting these built. With my two young children running around I can't get out the soldering iron out until they are asleep. And most of the time I'm too tired to solder. I order some solder paste. I going to try it out on a Norcal dummy load and a tunner upper before I try it on the ATS 3b. I'd hate to over cook it and ruin it.

Where did/do you buy the 2 and 3- cell LiPOs? I'd like to get some.

73 Tiana KE5ODX

On Sep 16, 2007, at 5:11 PM, Dave wrote:

> My ATS-3B is up and running on 40M. Not quite as much output power
> as my ATS-3A, but it seems to be running about the same as the 3A did
> before tweaking its filters.
>
> One thing to watch for: You might trip the 3B's overcurrent protection
> if you try to run on a 3-cell LiPo and the antenna is not properly
> tuned. I have to use my 2-cell LiPo for tune-up before switching to
> the 3-cell.
>
> Dave, WA3OFF
>

1552. Re: ATS-3B working nicely

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-17 03:41:32 UTC
From: Dave
Topic: 1548 Message: 1552

> Where did/do you buy the 2 and 3- cell LiPOs? I'd like to get some.

I got them from http://www.aeromicro.com/ and http://www.allerc.com/.
You'll need one of the special chargers to go with them. Search the
messages here for warnings and details on LiPo battery care.

I got the 80M module assembled just before the Run for the Bacon and
used 40M and 80M with results equal to what I would expect from my 3A.
80M seems to have a full 5W on the 3-cell battery (same as the 3A).

Dave

1553. Batteries - RE: [AT_Sprint] Re: ATS-3B working nicely

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-17 04:12:34 UTC
From: andrew.macallister@emersonprocess.com
Topic: 1553 Message: 1553
Attachments: 1 described; binary payloads are missing from this source WARC

I have been getting my lightweight 200 mAh LiPo's from http://www.batteriesamerica.com . Two of them provide about 8V for the duration of a 2-hour sprint with 3W out. My ATS-3 has a 2-cell, 650 mAh pack, but the ATS-3A uses only two 200 mAh batts. I am still looking for some ultra-lightweight batts for my hopefully, soon-to-arrive, ATS-3B.

72 de Andy W5ACM
4-time winner - skinny division 2007 - Spartan Sprint

From: AT_Sprint@yahoogroups.com on behalf of Dave
Sent: Sun 9/16/2007 10:41 PM
To: AT_Sprint@yahoogroups.com
Subject: [AT_Sprint] Re: ATS-3B working nicely

> Where did/do you buy the 2 and 3- cell LiPOs? I'd like to get some.

I got them from http://www.aeromicro.com/ <http://www.aeromicro.com/> and
http://www.allerc.com/. <http://www.allerc.com/.>
You'll need one of the special chargers to go with them. Search the
messages here for warnings and details on LiPo battery care.

I got the 80M module assembled just before the Run for the Bacon and
used 40M and 80M with results equal to what I would expect from my 3A.
80M seems to have a full 5W on the 3-cell battery (same as the 3A).

Dave

1554. E in display on initial power up

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-17 17:14:24 UTC
From: n2uz
Topic: 1554 Message: 1554

Hi there,

I just applied power to the ATS-3B and I am getting a "E" in the display with no 8 in the headphones. I can hear background noise.

L3 is not installed yet but the following are OK.
The 3.5 and 5v are OK.
TP1 is 3.96v OK
The PA gates are at 0v. OK
I can hear the dits and dahs with a keyer connected. OK
The PA keying transistor is near the DC supply while sending a string of dahs and slowly goes to zero when I stop the dahs, BUT I do hear dits when it gets near zero.
I can display the battery voltage (Menu and up key). It outputs to the headphone and also to the display. OK

Note: The correct 8(cw and display) did come up once or twice out of 25 or so turn ons.

Any ideas as to where the problem might be and should I go ahead and install L3 and continue on with the Reference, Local oscillators and band filter tests.

Jerry, N2UZ

1555. hot air methods

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-17 18:17:42 UTC
From: ak3f
Topic: 1555 Message: 1555

i am very new to hot air methods of soldering smt components.

1. the hot air from pencils, embossing tools, toaster ovens etc. why does the heat not damage the components? is it because the smt parts are all added prior to anything that would be ruined by such heat? is hot air typically used on the whole board only once during the initial installation on an otherwise naked board?

2. if the above is true and rework is necessary, then i suppose conventional soldering techniques must be used to prevent damage to non-smt parts, except perhaps if you are a careful expert and are using a narrowly directed hot air pencil?

cooking a circuit board in a toaster oven or in a electric skillet seems awfully brutal.

1556. Re: [AT_Sprint] hot air methods

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-17 18:50:19 UTC
From: mbhayden
Topic: 1555 Message: 1556
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

1557. New file uploaded to AT_Sprint

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-17 18:57:43 UTC
From: AT_Sprint@yahoogroups.com
Topic: 154 Message: 1557

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the AT_Sprint
group.

File : /label Both ATS3B N5BUD.pdf
Uploaded by : n5bud <buddybrown@...>
Description : My ATS 3B Label - Waiting for the build

You can access this file at the URL:
http://groups.yahoo.com/group/AT_Sprint/files/label%20Both%20ATS3B%20N5BUD.pdf

To learn more about file sharing for your group, please visit:
http://help.yahoo.com/help/us/groups/files

Regards,

n5bud <buddybrown@...>

1558. Re: [AT_Sprint] hot air methods

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-17 18:30:01 UTC
From: Karl Larsen
Topic: 1555 Message: 1558

ak3f wrote:
> i am very new to hot air methods of soldering smt components.
>
> 1. the hot air from pencils, embossing tools, toaster ovens etc. why
> does the heat not damage the components? is it because the smt parts
> are all added prior to anything that would be ruined by such heat? is
> hot air typically used on the whole board only once during the initial
> installation on an otherwise naked board?
>
> 2. if the above is true and rework is necessary, then i suppose
> conventional soldering techniques must be used to prevent damage to
> non-smt parts, except perhaps if you are a careful expert and are
> using a narrowly directed hot air pencil?
>
> cooking a circuit board in a toaster oven or in a electric skillet
> seems awfully brutal.
>
>
>
>
>
>
>
> Yahoo! Groups Links
>
>
>
>
>
>
I am sorry but your information is garbled. The way you do it with a
toaster oven is much different than the Cash Olsen method which used by
most people. If you want to learn this method put Cash Olsen in Google
and read his web page. I suggest you buy a cheap SM kit and build it
first. I did that and it really helps!

--

Karl F. Larsen, AKA K5DI
Linux User
#450462 http://counter.li.org.

1559. Re: [AT_Sprint] E in display on initial power up

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-17 20:56:29 UTC
From: Steven Weber
Topic: 1554 Message: 1559

>I just applied power to the ATS-3B and I am getting a "E" in the
>display with no 8 in the headphones. I can hear background noise.
>

Its possible you have an intermitent in the power jack or plug. Or, your pulling it out and pushing it back in too quickly. As explained in the manual, you have to wait 2-5 seconds after pulling the plug before putting it back in again or its likely to think it got an overcurrent rest and display the "E". This is a side effect of the MPU not drawing much current and takes awhile for the voltage on the filter caps to get low enough to corput RAM data used to tell if its powering up from a cold or warm state. I felt this was better than just doing a normal reset. If the overcurrent detector tripped while adjusting a tuner and it did a normal cold boot, you'd loose the frequency you were set at and you'd wonder why the rig just did something weird.

If the things listed below are working, then I take it you can clear the "E" by pushing the Menu button. The "E" can't come on until the MPU has done a complete initilization at least once.

>L3 is not installed yet but the following are OK.
>The 3.5 and 5v are OK.
>TP1 is 3.96v OK
>The PA gates are at 0v. OK
>I can hear the dits and dahs with a keyer connected. OK
>The PA keying transistor is near the DC supply while sending a string
>of dahs and slowly goes to zero when I stop the dahs, BUT I do hear
>dits when it gets near zero.
>I can display the battery voltage (Menu and up key). It outputs to
>the headphone and also to the display. OK
>
>Note: The correct 8(cw and display) did come up once or twice out of
>25 or so turn ons.
>
>Any ideas as to where the problem might be and should I go ahead and
>install L3 and continue on with the Reference, Local oscillators and
>band filter tests.
>

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

1560. Quandrie

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-17 21:39:22 UTC
From: Karl Larsen
Topic: 1560 Message: 1560

I was one of the first checks to Steve Weber for the ATS3B Kit.
About a month ago I sent Steve an email asking him to tear up my check
because I am having trouble with hand and arm movements brought on by
some kind of palsies that makes putting on the small parts a real
problem. I bought a set of good tweezers (4 each of of a special shape
for working with Gold jewelry).

It is 3:30 PM and too late to start trying to do this kit. My Wife
threw out my Cash Olsen solder laden paste so I will need to get more.
Cash lives here in Las Cruces so it's easy to get more.

So I have an unopened ATS3B kit that I am worried about trying to
build. I'm 72 years old and the vision and such are poor when compared
to 5 years ago. I still have and use my ATS3 which I had to send to
Steve because I put the pull-up resistor chip in backward. I was sure it
didn't matter :-)

If your waiting for a kit I will send you mine for the same price
$190.00 plus postage of about $3.00 if mailed to anywhere in the USA.

--

Karl F. Larsen, AKA K5DI
Linux User
#450462 http://counter.li.org.

1561. What PDA or palmtop device are you using or planning to use with your 3B?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-17 22:07:24 UTC
From: kc7fys
Topic: 1553 Message: 1561

There are several of you, and no doubt a growing number of you planning to--use the digital modes with your 3B. What PDA or palm device are you using? What are the requirements for a device that is interfaced with the 3B?
I have been snooping around in Akihabara, and there are dozens of different used models quite cheap. Basically obsolete except for working well in this application.
73, Jonathan

1562. Re: [AT_Sprint] hot air methods

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-17 22:06:34 UTC
From: john
Topic: 1555 Message: 1562

Mike, i the components can take the heat for a short time...that's the way they're reflowed in production, either by Vaporphase, IR ovens, etc...

The shorter the time, the better...

John K5MO

At 02:50 PM 9/17/2007, mbhayden wrote:
>sorry i forgot to sign this! i am
>mike, ak3f
>
>On 9/17/07, ak3f <<mailto:mbhayden@...>mbhayden@...> wrote:
>
>i am very new to hot air methods of soldering smt components.
>
>1. the hot air from pencils, embossing tools, toaster ovens etc. why
>does the heat not damage the components? is it because the smt parts
>are all added prior to anything that would be ruined by such heat? is
>hot air typically used on the whole board only once during the initial
>installation on an otherwise naked board?
>
>2. if the above is true and rework is necessary, then i suppose
>conventional soldering techniques must be used to prevent damage to
>non-smt parts, except perhaps if you are a careful expert and are
>using a narrowly directed hot air pencil?
>
>cooking a circuit board in a toaster oven or in a electric skillet
>seems awfully brutal.
>
>
>

1563. Re: What PDA or palmtop device are you using or planning to use with your 3B?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-17 23:21:26 UTC
From: kd1jv
Topic: 1553 Message: 1563

>
> There are several of you, and no doubt a growing number of you
> planning to--use the digital modes with your 3B. What PDA or palm
> device are you using? What are the requirements for a device that is
> interfaced with the 3B?

I belive you will need one that runs Windows CE or Mobile, so that
probably eliminates the Palms. Vojtech would know for sure.

KD1JV

1564. Re: Quandrie

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-17 23:19:09 UTC
From: kd1jv
Topic: 1560 Message: 1564

> I was one of the first checks to Steve Weber for the ATS3B Kit.
> About a month ago I sent Steve an email asking him to tear up my check

I don't belive I ever got that message Karl or would have done as you asked. I had already mailed the kit before I saw your other comment about the health problems and of course, it was too late then. If you don't find any takers for the kit, send it back and will refund the money, no problem.

72, Steve KD1JV

1565. Re: [AT_Sprint] Re: Quandrie

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-18 00:20:56 UTC
From: Karl Larsen
Topic: 1560 Message: 1565

kd1jv wrote:
>> I was one of the first checks to Steve Weber for the ATS3B Kit.
>> About a month ago I sent Steve an email asking him to tear up my
>>
> check
>
> I don't belive I ever got that message Karl or would have done as you
> asked. I had already mailed the kit before I saw your other comment
> about the health problems and of course, it was too late then. If you
> don't find any takers for the kit, send it back and will refund the
> money, no problem.
>
> 72, Steve KD1JV
>
>
>
Thanks Steve. I will not open the package and give the whole thing a
chance to come up with the best outcome. At this point it is send it
back but might change :-)

--

Karl F. Larsen, AKA K5DI
Linux User
#450462 http://counter.li.org.

1566. Re: [AT_Sprint] What PDA or palmtop device are you using or planning to use with your 3B?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-17 23:35:00 UTC
From: W2AGN
Topic: 1553 Message: 1566

kc7fys wrote:
> There are several of you, and no doubt a growing number of you
> planning to--use the digital modes with your 3B. What PDA or palm
> device are you using? What are the requirements for a device that is
> interfaced with the 3B?
> I have been snooping around in Akihabara, and there are dozens of
> different used models quite cheap. Basically obsolete except for
> working well in this application.
> 73, Jonathan
>
>

I assume any PDA that works with Pocketdigi will do. I have used both an old Ipaq 3630, and and more recently, a NEC Mobilepro 900C.

--

_ _ _ _ _
/ \ / \ / \ / \ / \ John L. Sielke
(W)(2)(A)(G)(N) http://w2agn.net
_/ _/ _/ _/ _/ http://www.blurty.com/users/w2agn
check out: http://groups.yahoo.com/group/QRPariahs/

1567. Re: [AT_Sprint] What PDA or palmtop device are you using or planning to use with your 3B?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-18 13:59:31 UTC
From: John A. Evans - N0HJ
Topic: 1553 Message: 1567

It's a shame that pocketdigi hasn't been ported to Linux yet. I've got a Zaurus SL-5500 here that has the same cpu architecture as most of these PDAs.

72 - john - n0hj

1568. RE: [AT_Sprint] What PDA or palmtop device are you using or planning to use with your 3B?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-18 01:09:13 UTC
From: Rob May
Topic: 1553 Message: 1568

This is the reply Vojtich sent when I posted a similar question:

"I develop PocketDigi on an old iPaq 3630 with Pocket PC 2002 system, 32MB ram and 206MHz CPU.
Generally, anything manufactured in 2002 and later shall work with PocketDigi.

It is possible to couple RX with Pocket PC by placing an ear bud on the internal microphone and it even works quite well, if you are in a quite place. But I would rather recommend to get hold of a device, which has external microphone input. Patrick N0HR compiled a list of devices, which supposedly have it. If the device has no mic input, you may hack it as I did.
http://www.n0hr.com/PocketDigi/PocketDigi_Tigertronics_Interface.htm

It is hard to recommend a particular device. There are a lot of them on the market and it is up to your taste. I would probably pick something newer with internal thumb keyboard. I suppose you may buy some Windows Mobile communicator from your cellular provider quite cheap.

If you are lucky, you may buy Jornada 720 on e-bay for hundred bucks. Jornada 720 is quite old design running Windows CE 3.0, no more manufactured, but it has a decent internal keyboard and 640x240 display. Handheld PCs are discontinued in favor of Windows Mobile devices. I still support Jornada 720, because some HAMs use it.

If you have more questions, please subscribe to hampocket at yahoogroups. Search the archive first and place the questions there.

73, Vojtech OK1IAK"

Rob
NV5E

To: AT_Sprint@yahoogroups.com
From: w2agn@...
Date: Mon, 17 Sep 2007 19:35:00 -0400
Subject: Re: [AT_Sprint] What PDA or palmtop device are you using or planning to use with your 3B?

kc7fys wrote:
> There are several of you, and no doubt a growing number of you
> planning to--use the digital modes with your 3B. What PDA or palm
> device are you using? What are the requirements for a device that is
> interfaced with the 3B?
> I have been snooping around in Akihabara, and there are dozens of
> different used models quite cheap. Basically obsolete except for

> working well in this application.
> 73, Jonathan
>
>

I assume any PDA that works with Pocketdigi will do. I have used both an old
Ipaq 3630, and and more recently, a NEC Mobilepro 900C.

--

_ _ _ _ _
/ \ / \ / \ / \ / \ John L. Sielke
(W)(2)(A)(G)(N) http://w2agn.net
_/ _/ _/ _/ _/ http://www.blurty.com/users/w2agn
check out: http://groups.yahoo.com/group/QRPariahs/

_____
More photos; more messages; more whatever - Get MORE with Windows Live™ Hotmail®. NOW with 5GB storage.
http://imagine-windowslive.com/hotmail/?locale=en-us&ocid=TXT_TAGHM_migration_HM_mini_5G_0907

1569. Re: [AT_Sprint] ATS-3B goes DIGITAL!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-17 12:20:29 UTC
From: Vojtěch Bubník
Topic: 1439 Message: 1569

Hello Joe.

> Has anyone measured the transmitted IMD for this mod?

I did not "measure" IMD of PSK31 transmitted by ATS-3a. On the following page, you will find screenshot of waterfall and sound file of PSK31 signal sent by ATS-3a and received by Sangean 909 short wave receiver. On the waterfall where the sidelobes are quite strong I suspect the receiver was overdriven.

http://www.kufr.cz/~ok1iak/temp/bpsk31-ats3-proof-of-concept.htm

The signal is not clean for sure, but I made tens of QSOs without any complaint. I bet the other party saw only the main lobe on their waterfall when transmitted with 2 watts.

73, Vojtech OK1IAK

1570. NAQCC Sprint clarification

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-18 23:24:41 UTC
From: Larry Makoski
Topic: 1570 Message: 1570

Sorry for the confusion - the Sprint is Wednesday evening - Thursday morning UTC time.

NOT Tuesday evening as I had erroneously posted.

Glad to see you're all paying attention!

--
73 de Larry W2LJ
QRP - When you care to send the very least!

http://www.w2lj.qrpradio.com
http://w2lj.blogspot.com/

1571. Re: E in display on initial power up

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-19 02:15:16 UTC
From: Dave
Topic: 1554 Message: 1571

> As explained in the manual, you have to wait 2-5 seconds after
> pulling the plug before putting it back in again or its likely to
> think it got an overcurrent rest and display the "E".

If the 80M band module or no band module is installed, even 20 seconds of power off is not enough. The main current drain on the 3.5V filter cap is the band indicator resistor on the band module. since 80M has no resistor, the cap takes a long time to discharge.

I see a few ways to deal with this. If no module is installed, with power disconnected hold down one of the buttons for 4 seconds (or all four buttons for 1 second) to discharge the cap. For the 80M module, you could install a 30K resistor as the 80M module's ID resistor. 30K should be large enough to distinguish the module from the 40M module.

Alternatively, to handle either case you could just put the 30K resistor across C58.

Dave, WA3OFF

1572. Re: E in display on initial power up

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-19 03:53:01 UTC
From: kd1jv
Topic: 1554 Message: 1572

> If the 80M band module or no band module is installed, even 20
> seconds of power off is not enough. The main current drain on the
> 3.5V filter cap is the band indicator resistor on the band module.
> since 80M has no resistor, the cap takes a long time to discharge.
>

Actually, the Ref clock and digital section of the DDS are also on the 3.5 volt supply, but I suspect these shut down and stop drawing sigificant current well before the MPU shuts down, as it is in sleep mode, drawing next to nothing for current and it can keep running down to about 1 volt.

The "E" thing was a last minute addition and I happened to have a 20M module installed at the time I tested it and said, ok, we can live with that. Always something! Gonna have to think about this for the second round of kits!

72, Steve KD1JV

1573. Re: [AT_Sprint] ATS-3B goes DIGITAL!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-19 10:12:34 UTC
From: W3JDR
Topic: 1439 Message: 1573

Hi Vojtech,

Some of my initial tests indicated that simple DDS phase inversion without envelope shaping produced a received "IMD" level of about 18 dB, as indicated on the decoder program's IMD meter. The main reason I ask about this is to determine if the improved envelope shaping in the ATS-3B provides an improvement in PSK31 sideband control (or "IMD" as many call it). A more basic question might be "does the firmware in the ATS3-B even attempt PSK31 envelope shaping?" I guess Steve would have to answer that, To make it work with shaping, the RF would have to be off at the instant a DDS phase inversion takes place.

Joe
W3JDR

----- Original Message -----
From: Vojtech Bubník
To: AT_Sprint@yahoogroups.com
Sent: Monday, September 17, 2007 8:20 AM
Subject: Re: [AT_Sprint] ATS-3B goes DIGITAL!

Hello Joe.

> Has anyone measured the transmitted IMD for this mod?

I did not "measure" IMD of PSK31 transmitted by ATS-3a. On the following page, you will find screenshot of waterfall and sound file of PSK31 signal sent by ATS-3a and received by Sangean 909 short wave receiver. On the waterfall where the sidelobes are quite strong I suspect the receiver was overdriven.

http://www.kufr.cz/~ok1iak/temp/bpsk31-ats3-proof-of-concept.htm

The signal is not clean for sure, but I made tens of QSOs without any complaint. I bet the other party saw only the main lobe on their waterfall when transmitted with 2 watts.

73, Vojtech OK1IAK

1574. Re: [AT_Sprint] Re: E in display on initial power up

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-19 14:18:43 UTC
From: Michael Harnage
Topic: 1554 Message: 1574

Nice catch Dave. I noticed that if I held two buttons
I would boot up properly everytime. If I did not, then
I would get the E most times. Hadn't looked at the
schematic yet, so glad you did!

-mike

--- Dave <dmertz@...> wrote:

> If the 80M band module or no band module is
> installed, even 20
> seconds of power off is not enough. The main
> current drain on the
> 3.5V filter cap is the band indicator resistor on
> the band module.
> since 80M has no resistor, the cap takes a long time
> to discharge.
>
> I see a few ways to deal with this. If no module is
> installed, with
> power disconnected hold down one of the buttons for
> 4 seconds (or all
> four buttons for 1 second) to discharge the cap.
> For the 80M module,
> you could install a 30K resistor as the 80M module's
> ID resistor.
> 30K should be large enough to distinguish the module
> from the 40M
> module.
>
> Alternatively, to handle either case you could just
> put the 30K
> resistor across C58.
>
> Dave, WA3OFF
>
>
>
>
>
> Yahoo! Groups Links
>
>
>
>
>

Be a better Globetrotter. Get better travel answers from someone who knows. Yahoo! Answers - Check it out.
http://answers.yahoo.com/dir/?link=list&sid=396545469

1575. Re: [AT_Sprint] ATS-3B goes DIGITAL!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-19 15:52:04 UTC
From: Steven Weber
Topic: 1439 Message: 1575

If you pound a 20 over S9 signal into the monitor receiver, you do see some hit of sidebands on the waterfall. But if you back off the coupling so that the signal is a more reasonable S4-5, it looks no different than an off the air signal.

>call it). A more basic question might be "does the firmware in the ATS3-B even attempt PSK31 envelope shaping?"

Only the intrinsic CW wave shaping, which has about a 2 ms rise and fall time now.

I guess Steve would have to answer that, To make it work with shaping, the RF would have to be off at the instant a DDS phase inversion takes place.
>

The transmitter keys off before phase inversions, then keys back on. I did try to PWM the PA voltage to get a waveshape similer to what a sound card generates, but with no luck. The way the keying circuit is set up is not condusive to PWM. It would really require a DAC and sine look up table. The on off keying scheme works well so there's no need to go to the trouble of adding a DAC at the power levels the ATS produces.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

1576. New file uploaded to AT_Sprint

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-19 16:12:06 UTC
From: AT_Sprint@yahoogroups.com
Topic: 154 Message: 1576

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the AT_Sprint
group.

File : /Generic ATS3B Label/label Both ATS3B Generic.pub
Uploaded by : n5bud <buddybrown@...>
Description : Label in MS Publisher format (can be modified)

You can access this file at the URL:
http://groups.yahoo.com/group/AT_Sprint/files/Generic%20ATS3B%20Label/label%20Both%20ATS3B%20Generic.pub

To learn more about file sharing for your group, please visit:
http://help.yahoo.com/help/us/groups/files

Regards,

n5bud <buddybrown@...>

1577. SMD-holding device from a coat hanger

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-19 16:33:46 UTC
From: John Shadle
Topic: 1577 Message: 1577

I seem to recall there being a device made from a coat hanger, fishing weight, and toothpick that some folks have made to help hold down SMD components while soldering.

I can't find the web site where the photo of this was located. If anyone has the link (or can provide info on the use of this device) I would greatly appreciate it!

Thanks.
-john W4PAH

1578. Re: [AT_Sprint] SMD-holding device from a coat hanger

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-19 16:48:55 UTC
From: mbhayden
Topic: 1577 Message: 1578
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

1579. Re: [AT_Sprint] SMD-holding device from a coat hanger

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-19 16:59:08 UTC
From: WA0ITP
Topic: 1577 Message: 1579

Hi John,

Was this it? http://www.wa0dx.org/wa0itp/accessories.html#doofus

---
I love this radio stuff!
72 73
Terry, WAØITP
http://www.wa0dx.org/wa0itp
http://www.wa0dx.org
http://www.4sqrp.com/
----- Original Message -----
From: John Shadle
To: AT_Sprint@yahoogroups.com
Sent: Wednesday, September 19, 2007 11:33 AM
Subject: [AT_Sprint] SMD-holding device from a coat hanger

I seem to recall there being a device made from a coat hanger, fishing
weight, and toothpick that some folks have made to help hold down SMD
components while soldering.

I can't find the web site where the photo of this was located. If anyone
has the link (or can provide info on the use of this device) I would
greatly appreciate it!

Thanks.
-john W4PAH

No virus found in this incoming message.
Checked by AVG Free Edition.
Version: 7.5.487 / Virus Database: 269.13.22/1015 - Release Date: 9/18/2007 11:53 AM

1580. Re: [AT_Sprint] SMD-holding device from a coat hanger

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-19 18:58:10 UTC
From: Mark Brueggemann
Topic: 1577 Message: 1580

--- John Shadle <shadle@...> wrote:

> I seem to recall there being a device made from a coat hanger,
> fishing weight, and toothpick that some folks have made to
> help hold down SMD components while soldering.

What's wrong with using a tweezers?

Mark K5LXP
Albuquerque, NM

1581. Re: [AT_Sprint] SMD-holding device from a coat hanger

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-19 19:06:48 UTC
From: Lee Mairs (SAG)
Topic: 1577 Message: 1581

The magic coat hanger doesn't require any of your hands to hold down the
SMD part.
It is a BIG help and costs almost nothing to build.
73 de Lee
KM4YY

Mark Brueggemann wrote:
> --- John Shadle <shadle@...> wrote:
>
>
>> I seem to recall there being a device made from a coat hanger,
>> fishing weight, and toothpick that some folks have made to
>> help hold down SMD components while soldering.
>>
>
> What's wrong with using a tweezers?
>
>
> Mark K5LXP
> Albuquerque, NM
>
>
>
> Yahoo! Groups Links
>
>
>
>
>

1582. Re: [AT_Sprint] SMD-holding device from a coat hanger

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-19 19:16:27 UTC
From: Gil Stacy
Topic: 1577 Message: 1582
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

1583. Re: [AT_Sprint] SMD-holding device from a coat hanger

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-19 19:24:46 UTC
From: Mark Brueggemann
Topic: 1577 Message: 1583

--- "Lee Mairs (SAG)" <lmairs@...> wrote:

> The magic coat hanger doesn't require any of your hands
> to hold down the SMD part.

Huh. 20+ years of working with this stuff and it never
ocurred to me to use anything but a tweezers. It would
take forever to put something together using a jig like
that.

Mark K5LXP
Albuquerque, NM

1584. Re: [AT_Sprint] New file uploaded to AT_Sprint

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-19 16:49:49 UTC
From: Ted W2TAG
Topic: 1459 Message: 1584

Hi Bud,

What version of Publisher did you use? I can't open your file with Publisher 2000.

Ted, W2TAG

----- Original Message -----
From: <AT_Sprint@yahoogroups.com>
To: <AT_Sprint@yahoogroups.com>
Sent: Wednesday, September 19, 2007 12:12 PM
Subject: [AT_Sprint] New file uploaded to AT_Sprint

>
> Hello,
>
> This email message is a notification to let you know that
> a file has been uploaded to the Files area of the AT_Sprint
> group.
>
> File : /Generic ATS3B Label/label Both ATS3B Generic.pub
> Uploaded by : n5bud <buddybrown@...>
> Description : Label in MS Publisher format (can be modified)
>
> You can access this file at the URL:
> http://groups.yahoo.com/group/AT_Sprint/files/Generic%20ATS3B%20Label/label%20Both%20ATS3B%20Generic.pub
>
> To learn more about file sharing for your group, please visit:
> http://help.yahoo.com/help/us/groups/files
>
> Regards,
>
> n5bud <buddybrown@...>
>
>
>
>
>
>
>
> Yahoo! Groups Links
>
>
>

1585. Solution for "E" on power up

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-19 20:38:22 UTC
From: Steven Weber
Topic: 1439 Message: 1585

A 22K resistor arcoss the 3.5 V supply is enough of a load to eliminate the "E" coming on with short power down/power up cycles. A good place to tack a 22K resistor is at the clock osc, from pins 4 to 2 or 1 to 2.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

1586. New file uploaded to AT_Sprint

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-19 22:45:06 UTC
From: AT_Sprint@yahoogroups.com
Topic: 154 Message: 1586

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the AT_Sprint
group.

File : /Building_an_SMD_Soldering_Tool.pdf
Uploaded by : al7fs <jimlarsen2002@...>
Description : Building_an_SMD_Soldering_Tool by K2CG Previously: KI4DGH

You can access this file at the URL:
http://groups.yahoo.com/group/AT_Sprint/files/Building_an_SMD_Soldering_Tool.pdf

To learn more about file sharing for your group, please visit:
http://help.yahoo.com/help/us/groups/files

Regards,

al7fs <jimlarsen2002@...>

1587. Photos of the kit for folks who are waiting.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-19 23:20:45 UTC
From: kc7fys
Topic: 1587 Message: 1587

Here's a flickr set of photos of the kit for folks who are waiting to
get theirs'.
(Is that apostrophe placed correctly?)
http://www.flickr.com/photos/jonathancharles/sets/72157602077258104/
J.Haynes KC7FYS

1588. "Nothing but a tweezers."

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-20 10:08:29 UTC
From: kc7fys
Topic: 1577 Message: 1588

> Huh. 20+ years of working with this stuff and it never
> ocurred to me to use anything but a tweezers. It would
> take forever to put something together using a jig like
> that.

Howdy Mark,
So you have the solder in one hand, the soldering iron in the other hand, and how do you use the tweezers to hold down the part? Do you lay the tweezers on the part? How's about a photo?
My doofus was much like what y'all have built. Using a toothpick for the business end. Mark's right--it does take quite a bit of time to place the component, put the doofus holding it down, then pick up the soldering iron and solder to go to work.
Maybe we're using a different technique?
Jonathan

1589. Re: [AT_Sprint] "Nothing but a tweezers."

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-20 10:20:46 UTC
From: Gil Stacy
Topic: 1577 Message: 1589
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

1590. Re: [AT_Sprint] "Nothing but a tweezers."

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-20 10:38:50 UTC
From: W3JDR
Topic: 1577 Message: 1590

You melt a little bit of solder onto one of the pads on the board, put down the solder, pick up the part with the tweezers, position it on the pads, and reflow the pad you just tinned while positioning the part in exactly in place. After that, it's easy to solder the remaining pads on the part, as it's locked in place. I've built many dozens of boards like this, and if you have the right tools and the right skills, you can fly. It's a 2-hand operation - no 'doofus' required. You can easily solder fine-pitch IC leads too. Just position and solder one corner leg as described above, then fine tune the rotation of the part on the pads, then solder all the remaining legs without regard to bridging, then come back with some fine solder-wick and wick away all the excess solder. Works every time for me (and all my technicians), but I've been doing this for years. I tried to get my techs to use the "Cash Olson" reflow oven method, but they said they can move faster soldering by hand. Your results will vary, so you should do whatever you feel most comfortable with.

Joe
W3JDR

----- Original Message -----
From: kc7fys
To: AT_Sprint@yahoogroups.com
Sent: Thursday, September 20, 2007 6:08 AM
Subject: [AT_Sprint] "Nothing but a tweezers."

> Huh. 20+ years of working with this stuff and it never
> ocurred to me to use anything but a tweezers. It would
> take forever to put something together using a jig like
> that.

Howdy Mark,
So you have the solder in one hand, the soldering iron in the other hand, and how do you use the tweezers to hold down the part? Do you lay the tweezers on the part? How's about a photo?
My doofus was much like what y'all have built. Using a toothpick for the business end. Mark's right--it does take quite a bit of time to place the component, put the doofus holding it down, then pick up the soldering iron and solder to go to work.
Maybe we're using a different technique?
Jonathan

1591. Re: [AT_Sprint] "Nothing but a tweezers."

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-20 11:48:57 UTC
From: Karl Larsen
Topic: 1577 Message: 1591

W3JDR wrote:
> You melt a little bit of solder onto one of the pads on the board, put
> down the solder, pick up the part with the tweezers, position it on
> the pads, and reflow the pad you just tinned while positioning the
> part in exactly in place. After that, it's easy to solder
> the remaining pads on the part, as it's locked in place. I've built
> many dozens of boards like this, and if you have the right tools and
> the right skills, you can fly. It's a 2-hand operation - no 'doofus'
> required. You can easily solder fine-pitch IC leads too. Just position
> and solder one corner leg as described above, then fine tune the
> rotation of the part on the pads, then solder all the remaining legs
> without regard to bridging, then come back with some fine solder-wick
> and wick away all the excess solder. Works every time for me (and all
> my technicians), but I've been doing this for years. I tried to get my
> techs to use the "Cash Olson" reflow oven method, but they said they
> can move faster soldering by hand. Your results will vary, so you
> should do whatever you feel most comfortable with.
>
> Joe
> W3JDR
>
>
>
> ----- Original Message -----
> *From:* kc7fys <mailto:kc7fys@...>
> *To:* AT_Sprint@yahoogroups.com <mailto:AT_Sprint@yahoogroups.com>
> *Sent:* Thursday, September 20, 2007 6:08 AM
> *Subject:* [AT_Sprint] "Nothing but a tweezers."
>
>
> > Huh. 20+ years of working with this stuff and it never
> > ocurred to me to use anything but a tweezers. It would
> > take forever to put something together using a jig like
> > that.
>
> Howdy Mark,
> So you have the solder in one hand, the soldering iron in the other
> hand, and how do you use the tweezers to hold down the part? Do you
> lay the tweezers on the part? How's about a photo?
> My doofus was much like what y'all have built. Using a toothpick for
> the business end. Mark's right--it does take quite a bit of time to
> place the component, put the doofus holding it down, then pick up the
> soldering iron and solder to go to work.
> Maybe we're using a different technique?
> Jonathan

>
> ._,___
There is no question that a well trained person with good tweezers
can do an ATS kit in short order loosing few chips to loss.

The Cash Olsen method requires this same skill but with a HUGE
difference. First you put some "solderpaste" on the pads you want to
work with. Lets say it is the .01 uf capacitors and there are 16 of
them. You put a tiny amount of the paste on the 16 pads with the
hypodermic and needle. Now you pick up one capacitor and put it in the
paste at the first location. Get it "about right". Do this 16 times and
all the .01 uf capacitors are on the board. Go on to the next item.

Your looking at the manual to see where the components are going to
be mounted. This you must do with both methods and it takes time. Make
sure you do this right.

When you have every component mounted on the top side except the
plugs that are plastic and might melt in the high heat, you look the
board over with care and make sure nothing fell off or was moved too far
from it's pads, and then in 15 minutes you "solder 563 pins". The
amazing thing is that all the tiny chips are centered on their pads.
This is due to a complex factor of the pre-soldered pads acting on the
components just when the temperature reaches the melting point of
solder. It works.

Again look at the almost finished top side. If there are any solder
bridges use "Solder Wick" to clear them. When done start on the back
side. Mount everything in the paste and when done and checked put the
board back in the pan with back side up. When done cooking the back side
let the board cool off and check for any problems.

Now mount the plastic plugs with your soldering iron and the board
is complete and ready for test.

--

Karl F. Larsen, AKA K5DI
Linux User
#450462 http://counter.li.org.

1592. Re: [AT_Sprint] "Nothing but a tweezers."

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-20 12:39:53 UTC
From: John D'Ausilio
Topic: 1577 Message: 1592
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

1593. Re: [bulk] Re: [AT_Sprint] "Nothing but a tweezers."

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-20 13:21:59 UTC
From: John Graf
Topic: 1577 Message: 1593

I've built a half-dozen kits in the last year and soldered exactly
two SMT components. I've been watching this thread, and I have to
say that for people with "traditional" soldering skills, this message
makes the most sense. Thanks for putting the info out there!

73,

John, WA6L

On Sep 20, 2007, at 3:38 AM, W3JDR wrote:

>
> You melt a little bit of solder onto one of the pads on the board,
> put down the solder, pick up the part with the tweezers, position
> it on the pads, and reflow the pad you just tinned while
> positioning the part in exactly in place. After that, it's easy to
> solder the remaining pads on the part, as it's locked in place.
> I've built many dozens of boards like this, and if you have the
> right tools and the right skills, you can fly. It's a 2-hand
> operation - no 'doofus' required. You can easily solder fine-pitch
> IC leads too. Just position and solder one corner leg as described
> above, then fine tune the rotation of the part on the pads, then
> solder all the remaining legs without regard to bridging, then come
> back with some fine solder-wick and wick away all the excess
> solder. Works every time for me (and all my technicians), but I've
> been doing this for years. I tried to get my techs to use the "Cash
> Olson" reflow oven method, but they said they can move faster
> soldering by hand. Your results will vary, so you should do
> whatever you feel most comfortable with.
>
> Joe
> W3JDR
>
>
> ----- Original Message -----
> From: kc7fys
> To: AT_Sprint@yahoogroups.com
> Sent: Thursday, September 20, 2007 6:08 AM
> Subject: [AT_Sprint] "Nothing but a tweezers."
>
>
> > Huh. 20+ years of working with this stuff and it never
> > ocurred to me to use anything but a tweezers. It would
> > take forever to put something together using a jig like
> > that.
>

> Howdy Mark,
> So you have the solder in one hand, the soldering iron in the other
> hand, and how do you use the tweezers to hold down the part? Do you
> lay the tweezers on the part? How's about a photo?
> My doofus was much like what y'all have built. Using a toothpick for
> the business end. Mark's right--it does take quite a bit of time to
> place the component, put the doofus holding it down, then pick up the
> soldering iron and solder to go to work.
> Maybe we're using a different technique?
> Jonathan
>
>
>
>

--
The world is best viewed through the ears of a horse.

1594. RE: [bulk] Re: [AT_Sprint] "Nothing but a tweezers."

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-20 13:58:22 UTC
From: andrew.macallister@emersonprocess.com
Topic: 1577 Message: 1594

I've been doing surface mount ops just as Joe described for some time now. Both my ATS-3 and ATS-3A went together via this process. I grind down a soldering-iron tip until it is an ultra-fine point, use the solder that comes with the kit, and get after it. A steady hand and lots of light and magnification take care of the rest! I got the ATS-3B manual printed yesterday, and have cleared some calendar space over the weekend for some serious soldering fun. By the time I am through with an ATS kit, my ultra-fine-point soldering-iron tip is ready for another trip to the grinder, or replacement.

My first ham kit was an AMECO AC-1 in 1969. No extra light or magnification was needed...

Andy W5ACM

Ex WN5ZIB, WA5ZIB

From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com] On Behalf Of John Graf
Sent: Thursday, September 20, 2007 8:22 AM
To: AT_Sprint@yahoogroups.com
Subject: Re: [bulk] Re: [AT_Sprint] "Nothing but a tweezers."

I've built a half-dozen kits in the last year and soldered exactly two SMT components. I've been watching this thread, and I have to say that for people with "traditional" soldering skills, this message makes the most sense. Thanks for putting the info out there!

73,

John, WA6L

On Sep 20, 2007, at 3:38 AM, W3JDR wrote:

You melt a little bit of solder onto one of the pads on the board, put down the solder, pick up the part with the tweezers, position it on the pads, and reflow the pad you just tinned while positioning the part in exactly in place. After that, it's easy to solder the remaining pads on the part, as it's locked in place. I've built many dozens of boards like this, and if you have the right tools and the right skills, you can fly. It's a 2-hand operation - no 'doofus' required. You can easily solder fine-pitch IC leads too. Just position and solder one corner leg as described above, then fine tune the rotation of the part on the pads, then solder all the remaining legs without regard to bridging, then come back with some fine solder-wick and wick away all the excess solder.

Works every time for me (and all my technicians), but I've been doing this for years. I tried to get my techs to use the "Cash Olson" reflow oven method, but they said they can move faster soldering by hand. Your results will vary, so you should do whatever you feel most comfortable with.

Joe

W3JDR

----- Original Message -----

From: kc7fys <mailto:kc7fys@...>

To: AT_Sprint@yahoogroups.com <mailto:AT_Sprint@yahoogroups.com>

Sent: Thursday, September 20, 2007 6:08 AM

Subject: [AT_Sprint] "Nothing but a tweezers."

> Huh. 20+ years of working with this stuff and it never
> ocurred to me to use anything but a tweezers. It would
> take forever to put something together using a jig like
> that.

Howdy Mark,
So you have the solder in one hand, the soldering iron in the other
hand, and how do you use the tweezers to hold down the part? Do you
lay the tweezers on the part? How's about a photo?
My doofus was much like what y'all have built. Using a toothpick for
the business end. Mark's right--it does take quite a bit of time to
place the component, put the doofus holding it down, then pick up the
soldering iron and solder to go to work.
Maybe we're using a different technique?
Jonathan

1595. Re: [AT_Sprint] "Nothing but a tweezers."

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-20 14:11:53 UTC
From: Mark Brueggemann
Topic: 1577 Message: 1595

Gil NN4CW wrote:

> As for length of time, I'd rather spend close to "forever"
> soldering and no time troubleshooting than the other way
> around. This ain't no track meet.

Unless you do it for paying customers (which I often do, either my day job or home business). In the case of kitbuilding, what would you rather be doing, spending weeks putting on the parts or weeks operating the toy?

If you need the "doofus" because you have a hard time due to a handicap of some sort that's one thing, but otherwise I see it as a huge impediment to efficient construction.

W3JDR nailed it. Everyone has their subtle differences in technique, mine is to tin one pad of each of the parts of a "run" (single value, one section of the board, etc) then place them all at once. Once they're all tacked down on one end, go back with the iron and solder (2 hands) and tack down the other end or remaining pins. When you have a build involving 4 or 5 thousand parts at a shot as I have done, you can't be dorking around with a fixture on each one. The only real risk is you might skip over a part or two on the 2nd pass, so close inspection is required. The same issue exists with hot air reflow and parts that tombstone or don't wet, so there's no magic formula for 100% success.

I've played with some of the other reflow schemes and they all work OK. There is probably a happy medium between using either technique (iron or reflow), so it's probably a good idea to be versed at both. The equipment investment is minimal, so there's really no reason why not.

Another technique I use is to color the pads with different color Sharpies. You could color code your entire PCB if you wanted to, which will help minimize placement errors, especially on boards like I make without a silkscreen. Not sure if Steve did this with the 3B, but on the ATS3 I built he color coded the strips of parts- great idea. You could match the colors you put on the board to those of the strips. You can spend a lot of time hunting between the pictorial, schematic and PCB to place one part at a time, but color coding makes it quick and easy. As soon

as you touch the pad with an iron the ink vaporizes.

W1RT mentioned:

> Prep the pad with a swipe from the liquid flux pen, it'll
> suck the solder right off the tip!

That's another "trade secret"- liquid flux. Depending on what I'm building, sometimes I'll brush the entire PCB with liquid flux and let it dry. Since I make most of my own PCB's I don't normally tin plate them so the flux helps burn through the inevitable oxidation that is present on the bare copper. You can buy small bottles of rosin flux from anyone that carries the GC Electronics brand. One bottle has lasted me about a decade so far. Flux is especially critical for fine pitch IC's or BGA's.

I think if I had to spend 2 minutes messing with a "doofus" to put each and every part down on a kit, I'd hate SMT too. Practice with the tweezer technique and pretty soon you're putting them down 100 or more an hour.

Mark K5LXP
Albuquerque, NM

1596. Re: New file uploaded to AT_Sprint

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-20 15:21:18 UTC
From: Richard H. Brown, Jr.
Topic: 1459 Message: 1596

Hi Ted,
I used Pub 2002 for this one, I will upload a couple more
copies made using save-as and selecting Pub 2000 and Pub 98.
I hope they work for you and others.
72,
Buddy - N5BUD

--- In AT_Sprint@yahoogroups.com, "Ted W2TAG" <w2tag@...> wrote:
>
> Hi Bud,
>
> What version of Publisher did you use? I can't open your file with
Publisher
> 2000.
>
> Ted, W2TAG
>
> ----- Original Message -----
> From: <AT_Sprint@yahoogroups.com>
> To: <AT_Sprint@yahoogroups.com>
> Sent: Wednesday, September 19, 2007 12:12 PM
> Subject: [AT_Sprint] New file uploaded to AT_Sprint
>
>
> > >
> > > Hello,
> > >
> > > This email message is a notification to let you know that
> > > a file has been uploaded to the Files area of the AT_Sprint
> > > group.
> > >
> > > File : /Generic ATS3B Label/label Both ATS3B Generic.pub
> > > Uploaded by : n5bud <buddybrown@...>
> > > Description : Label in MS Publisher format (can be modified)
> > >
> > > You can access this file at the URL:
> > > http://groups.yahoo.com/group/AT_Sprint/files/Generic%20ATS3B%
20Label/label%20Both%20ATS3B%20Generic.pub
> > >
> > > To learn more about file sharing for your group, please visit:
> > > http://help.yahoo.com/help/us/groups/files
> > >
> > > Regards,
> > >
> > > n5bud <buddybrown@...>

> >
> >
> >
> >
> >
> >
> >
> > Yahoo! Groups Links
> >
> >
> >
>

1597. New file uploaded to AT_Sprint

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-20 15:33:02 UTC
From: AT_Sprint@yahoogroups.com
Topic: 154 Message: 1597

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the AT_Sprint
group.

File : /Generic ATS3B Label/Pub 98 Version - label Both ATS3B Generic.pub
Uploaded by : n5bud <buddybrown@...>
Description : Publisher 98 Version

You can access this file at the URL:
http://groups.yahoo.com/group/AT_Sprint/files/Generic%20ATS3B%20Label/Pub%2098%20Version%20-%20label%20Both%20ATS3B%20Generic.pub

To learn more about file sharing for your group, please visit:
http://help.yahoo.com/help/us/groups/files

Regards,

n5bud <buddybrown@...>

1598. Show your soldering tips, ladies and gentlemen.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-20 23:10:48 UTC
From: kc7fys
Topic: 1577 Message: 1598

Pre-tinning a pad. Clearly the key difference in doofus use vs. not needing one. Steve, I suspect I may rightfully consider you an authority on this. For the smallest of the components, did you need to wick off very much excess? There's a lot of talk about methods--but those who have a tried-and-true iron method seem to be of the less-talk-more-soldering school.
Could we get a photo or two of your soldering iron tips, those of you who solder even the smallest components with an iron and wick?
Thanks,
Jonathan

1599. Re: "Nothing but a tweezers."

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-20 23:14:36 UTC
From: kc7fys
Topic: 1577 Message: 1599

--- In AT_Sprint@yahoogroups.com, Mark Brueggemann <qrq_cw@...> wrote:
>
> Gil NN4CW wrote:
>
> Mark K5LXP
> Albuquerque, NM

Thanks very much, Mark. (And others!)
Jonathan KC7FYS
Chiba Japan

1600. Liquid flux pen.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-20 23:18:51 UTC
From: kc7fys
Topic: 1577 Message: 1600

--- In AT_Sprint@yahoogroups.com, "John D'Ausilio" <jdausilio@...> wrote:
>
> I prefer melting a little solder onto the *iron*, holding the part with
> tweezers in the left and the iron in the right. Prep the pad with a
swipe
> from the liquid flux pen, it'll suck the solder right off the tip!

What liquid flux pen do you use? (The definite article 'the' indicates
to me it's something I've been referred to before--but I don't recall
what you use.)
Thanks for the info.
Jonathan

1601. Re: [AT_Sprint] Show your soldering tips, ladies and gentlemen.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-20 23:19:11 UTC
From: Jim Larsen - AL7FS
Topic: 1577 Message: 1601

My only real experience so far is with the monster parts in the ATS-2.
Details are at: http://www.al7fs.us/AL7FS5ATSprint2.html

Concerning pre-tinning, I wrote, "Place the part, put the doofus on top, use the solder provided or the smallest you can possibly buy, and go for it. It is actually pretty painless. When I built the SMK-1 kit, I first tinned a tiny bit of solder on one of the pads. I tried this again for this kit and did not like the results, at least for me. This method seemed to make the parts move off center and look bad. My three fishing-weight doofus held the part firmly enough that I could just go for it with my 700 degree soldering tip."

The tip photos are included in the article.

73, Jim
Jim Larsen, AL7FS
ARRL Candidate for Section Manager, Alaska Section
Vice President, Anchorage Amateur Radio Club
Anchorage, Alaska
http://www.AL7FS.us/

1602. Re: [AT_Sprint] Liquid flux pen.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-20 23:27:45 UTC
From: john
Topic: 1577 Message: 1602

And where does one purchase one?

Thanks!
John K5MO

At 07:18 PM 9/20/2007, you wrote:
>--- In AT_Sprint@yahoogroups.com, "John D'Ausilio" <jdausilio@...> wrote:
> >
> > I prefer melting a little solder onto the *iron*, holding the part with
> > tweezers in the left and the iron in the right. Prep the pad with a
>swipe
> > from the liquid flux pen, it'll suck the solder right off the tip!
>
>What liquid flux pen do you use? (The definite article 'the' indicates
>to me it's something I've been referred to before--but I don't recall
>what you use.)
>Thanks for the info.
>Jonathan
>
>
>
>
>Yahoo! Groups Links
>
>
>

1603. Re: [AT_Sprint] "Nothing but a tweezers."

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-20 23:40:07 UTC
From: Gil Stacy
Topic: 1577 Message: 1603
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

1604. Re: [AT_Sprint] Show your soldering tips, ladies and gentlemen.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-21 00:00:48 UTC
From: Michael Harnage
Topic: 1577 Message: 1604

I don't have photos but mostly used a PTP-7 for my
Weller. It's good for 0805 parts and bigger. For
really small (0603) I used a PTS-7. The standard tip
on my Weller was a PTA-7. You can look them up and
find pictures on the web easy enough.

-mike/w1mt

--- kc7fys <kc7fys@...> wrote:

> Could we get a photo or two of your soldering iron
> tips, those of you
> who solder even the smallest components with an iron
> and wick?

_____
Boardwalk for $500? In 2007? Ha! Play Monopoly Here and Now (it's updated for today's
economy) at Yahoo! Games.
http://get.games.yahoo.com/proddesc?gamekey=monopolyherenow

1605. Re: [AT_Sprint] Show your soldering tips, ladies and gentlemen.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-21 00:49:24 UTC
From: Gil Stacy
Topic: 1577 Message: 1605
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

1606. WTB: ATS-3 built or unbuilt

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-21 00:49:59 UTC
From: skip14618
Topic: 1606 Message: 1606

New to the group, and would like to give a ATS-3 a try.
If you have a kit that you never got around to assembling, or will be upgrading to the new ATS-3B.
Please contact me off line with the details (ie. version, condition, and asking price), and
pictures if you have them.

Thanks / 72's
James
K2JSB
jsbraun at frontiernet.net

1607. Re: [AT_Sprint] Liquid flux pen.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-21 01:15:02 UTC
From: John D'Ausilio
Topic: 1577 Message: 1607

http://dkc3.digikey.com/PDF/T073/P2087.pdf

mouser probably has it as well

I recommend that the pad-tinners give my way a try. You need a small tip (I think mine is an EMA, 1.2mm narrow screwdriver) and small solder, just flux both pads, touch the solder to the tip so you get a little pillow (should be wetted to the tip, not blobbed out), place the part with tweezers and swipe the tip across the junction of the pad and the part. I run around 675 degrees.

de w1rt/john

On 9/20/07, john <johnmb@...> wrote:
> And where does one purchase one?
>
> Thanks!
> John K5MO
>
>
> At 07:18 PM 9/20/2007, you wrote:
> >--- In AT_Sprint@yahoogroups.com, "John D'Ausilio" <jdausilio@...> wrote:
> > >
> > > I prefer melting a little solder onto the *iron*, holding the part with
> > > tweezers in the left and the iron in the right. Prep the pad with a
> >swipe
> > > from the liquid flux pen, it'll suck the solder right off the tip!
> > >
> >What liquid flux pen do you use? (The definite article 'the' indicates
> >to me it's something I've been referred to before--but I don't recall
> >what you use.)
> >Thanks for the info.
> >Jonathan
> >
> >
> >
> >
> >Yahoo! Groups Links
> >
> >
> >
>
>
>
> Yahoo! Groups Links

>
>
>
>

1608. Re: [AT_Sprint] Liquid flux pen.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-21 01:46:26 UTC
From: Gil Stacy
Topic: 1577 Message: 1608
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

1609. Re: [AT_Sprint] Liquid flux pen.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-21 02:00:09 UTC
From: John D'Ausilio
Topic: 1577 Message: 1609
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

1610. Re: Liquid flux pen.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-21 02:23:49 UTC
From: kd1jv
Topic: 1577 Message: 1610

Actually, in not recommending using liquid flux, I had in mind when it's used in excess, covering the whole board with a layer of the gooie stuff that comes in a bottle. When done that way, it makes a mess and causes problems. I had a board sent back to me built that way once and had to remove pretty much every part, clean the flux out from under it and put the part back in before it would work properly. Heck of a job.

A little tiny dab of dilute flux from a pen, placed just on a pad would most likey be fine, though I've never found a need for it.

Steve KD1JV

1611. Re: [AT_Sprint] Re: Liquid flux pen.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-21 02:34:24 UTC
From: John D'Ausilio
Topic: 1577 Message: 1611

Actually, the flux pen contains flux dissolved in some kind of
fast-drying solvent. You just wipe the pad and it dries to a sort of a
powdery residue. If you're hitting the joint with solder, you get
rosin from the core so you really don't need it. If you do the
solder-on-the-tip method, the flux is gone by the time you get the
solder to the joint ..

de w1rt/john

On 9/20/07, kd1jv <kd1jv@...> wrote:
>
> A little tiny dab of dilute flux from a pen, placed just on a pad would
> most likey be fine, though I've never found a need for it.

1612. Re: Liquid flux pen.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-21 03:35:03 UTC
From: Dave
Topic: 1577 Message: 1612

For SMT, I use nothing but Kester 2331-ZX water soluble liquid flux and #331 solder (containing the same water soluble flux). Looks like they are dropping the leaded versions, though. A simple water rinse (mandatory) and air blow dry and all of the flux is gone. I switch to rosin core once I start installing the parts that I would rather not wash, like the trimmer caps, buttons and the crystals (too tight to the board).

Dave, WA3OFF

1613. Re: Liquid flux pen.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-21 03:48:13 UTC
From: Dave
Topic: 1577 Message: 1613

> #331 solder (containing the same water soluble flux). Looks like
> they are dropping the leaded versions, though.

I think I was wrong on that, at least in the US.

Dave

1614. Re: [AT_Sprint] Re: Liquid flux pen.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-21 12:31:11 UTC
From: w9ya@qrparci.net
Topic: 1577 Message: 1614

>> #331 solder (containing the same water soluble flux). Looks like they
>> are dropping the leaded versions, though.
>
> I think I was wrong on that, at least in the US.
>
> Dave

Hey gang;

Um, it might be very wise to stay away from any of the "water soluble" stuff, as it HAS TO BE cleaned off rather thoroughly. And by a specific water rinse. <- Too much time and trouble considering that a water rinse is not needed if you choose another kind of flux like either Kester 951 pen (or the RMA Kester stuff...I forget the number for the pen, but the catalogs all have it).

Then after I am finished soldering I just use one of the cleaner pens for use on soldering residues and just wipe.

Lots of pens I guess !!

Vy 72;

Bob
w9ya

Liviu Librescu - ?n veci pomenirea lui.
(May his memory be eternal.)

1615. Re: [AT_Sprint] Re: Liquid flux pen.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-21 13:09:51 UTC
From: Gil Stacy
Topic: 1577 Message: 1615
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

1616. Re: [AT_Sprint] Re: Liquid flux pen.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-21 13:31:09 UTC
From: w9ya@qrparci.net
Topic: 1577 Message: 1616

Hey gang;

Here are the specific part numbers of the pens I use:

- Kester #951, for use with the Kester #245 no-clean solder (No-Clean Flux)

- Kester #186, for use with the Kester #66 or 66/44 R(M)A Solder (Rosin Flux)

- Chemtronics No Clean Flux Remover Pen

- Chemtronics Rosin Flux Remover Pen

The general procedure I use is the No-Clean flux pen touched lightly to the pads and then placing the part and then solder lightly touched to the tip of the iron. The final step is touching the pad AND the held part simultaneously with the iron tip. Hold for two seconds and then lightly move the iron around for another second or slightly longer to flow the solder evenly. You will know when it is done right, as the joint will be nice and shiny and slightly concave if you didn't use too much of the flux or solder.

For clean up I then use the Chemtronics pens, starting with the No-clean one and IF I am being really anal-retentive, I will follow that up with the Rosin one (which is mostly alcohol and the first cleaning pen is not).

As previously mentioned the No-Clean flux pen is low-solids, so you should not have any issues with your circuits failing due to the flux, as long as you don't go overboard on its' application.

Oh yeah; I had lunch yesterday with Mark, K5LXP, and he was quick to point out that he forgot to mention (in his post from yesterday morning to our group) that a HOT iron with a sufficiently large tip is required for this stuff. Not too big but you can go too small. And you can use too little heat. He (and I) recommend a tip set for 700 degrees and NO filing down of the tip. Get a smaller one instead, as you ruin the composition of the tip if you start filing away at it. It is o.k. if the tip is as large, or even slightly larger, than the work at hand. I would add that a slightly chisel-shaped tip is handy as well, but not absolutely required.

(With too small tips and too little heat you loose the thermal mass that makes soldering easy and trouble-free. AND with no-clean flux you gain complete freedom from potential latent corrosive problems of the other fluxes and especially the water-soluble ones.)

Vy 72;

Bob
w9ya

>
>>> #331 solder (containing the same water soluble flux). Looks like they
>>> are dropping the leaded versions, though.
>>
>> I think I was wrong on that, at least in the US.
>>
>> Dave
>
> Hey gang;
>
> Um, it might be very wise to stay away from any of the "water soluble"
> stuff, as it HAS TO BE cleaned off rather thoroughly. And by a specific
> water rinse. <- Too much time and trouble considering that a water rinse
> is not needed if you choose another kind of flux like either Kester 951
> pen (or the RMA Kester stuff...I forget the number for the pen, but the
> catalogs all have it).
>
> Then after I am finished soldering I just use one of the cleaner pens
> for use on soldering residues and just wipe.
>
> Lots of pens I guess !!
>
> Vy 72;
>
> Bob
> w9ya
>
> Liviu Librescu - ?n veci pomenirea lui.
> (May his memory be eternal.)

1617. The easy way to solder small items

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-21 14:20:51 UTC
From: Karl Larsen
Topic: 1617 Message: 1617

All this talk about liquid flux and special rigs to hold the chip
while you manual solder the thing makes me weak at my knees. There is a
lot better way to do this. Look at:

http://www.zianet.com/erg/SMT_Soldering.html

and see how cheap and easy it is to use this method. The solder-paste
costs $5.00 and it is enought to build this and the ATS3E :-)

--

Karl F. Larsen, AKA K5DI
Linux User
#450462 http://counter.li.org.

1618. Re: Liquid flux pen.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-21 14:37:03 UTC
From: Dave
Topic: 1577 Message: 1618

> And by a specific water rinse.

That's why I specifically mentioned the Kester 331/2331 stuff. Other water soluble fluxes are pretty nasty, but the rinse for this stuff requires nothing special. I prefer hot water, but cold water works just as well and blowing with air eliminates all the dissolved remains.

http://www.kester.com/en-us/products/prodcat_detail.aspx?pid=23

Dave, WA3OFF

1619. Re: [AT_Sprint] Re: Liquid flux pen.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-21 14:56:50 UTC
From: w9ya@qrparci.net
Topic: 1577 Message: 1619

>> And by a specific water rinse.
>
> That's why I specifically mentioned the Kester 331/2331 stuff. Other
> water soluble fluxes are pretty nasty, but the rinse for this stuff
> requires nothing special. I prefer hot water, but cold water works just
> as well and blowing with air eliminates all the dissolved remains.
>
> http://www.kester.com/en-us/products/prodcat_detail.aspx?pid=23
>
> Dave, WA3OFF

Hey Dave and the gang;

My experience with the water soluble stuff is from long ago. And it
still scares me !!

But I will definitely consider your experience if I choose to use it. It
is nice to know they improved that product type.

For me I still want to clean up with solvents, for whatever (peculiar)
reasons, so I would end up using the same kinds of things I am now, even
with the water rinse. <- All of which is probably not necessary with the
procedure you recommend, but .....

Thanks again for the info OM es

Vy 72;

Bob
w9ya

Liviu Librescu - ?n veci pomenirea lui.
(May his memory be eternal.)

1620. Re: "Nothing but a tweezers."

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-21 15:10:48 UTC
From: David Lear
Topic: 1577 Message: 1620

I built the ATS3A not using Cash Olsen's method. The first tool I bought was the micro fine tweezers (EROP5SA) and after soldering several parts I got round to installing U7 and held it with the tweezers only to have them slip and have the chip fly off somewhere. I never did find it, so it's still in my shack somewhere. Steve tells me that chip happens to be the most expensive part in the rig. Also had that happen with a couple of resistors.

SO NO MORE TWEEZERS FOR ME!

I finished using beeswax and toothpicks. A dab under the component to hold it in place and a dab on top to carry it (not sure who recommended that method....may have been Steve). Worked out well for me. Also have used the "Doofus" and that worked out well also.

Otherwise I used a Hakko 936 with the their smallest tip at 700 degs and RShack .015" solder. My 70 year old eyes needed as much "lighted" magnification as I could find, both bench fixed and handheld.

A Great rig and in my opinion and the only one for Spartan Sprint and that's all I use it for. Great design Steve, carry on the good work. BTW, I have also built a K2, K1 and a KX-1.

One of these days I'll get round to using W1MT's firmware.

73, Dave NE5DL

1621. RE: RE: [AT_Sprint] Re: "Nothing but a tweezers." - or a dental pick...

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-21 15:28:58 UTC
From: andrew.macallister@emersonprocess.com
Topic: 1577 Message: 1621

Just a few more comments on my experiences...

I actually just use a fine-point dental pick (cheap at hamfests - made in India) to get whatever micro-thingie in place and hold it for the initial tack solder job on one pin or side. I then finish out the other lead or leads, and then revisit the initial tack point for good flow. Most of the time I wear headgear magnifiers (cheap from lots of places), and use the desk magnifier, in addition to the headgear, for those nano/pico leads on the impossible chip. The work area is a large sheet of white paper with some edges turned up to capture escaping electro-critters. So far, so good.

I used to use the ATS-3 rigs only for the Spartan Sprint, but now have found them to be my preferred rig for lots of other QRP endeavors. I don't know if I can get the 3B lighter than my 2 oz 3A (batteries, keyer paddle and earbuds included), but I will give it a try!

72 de Andy W5ACM

From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com] On Behalf Of David Lear
Sent: Friday, September 21, 2007 10:11 AM
To: AT_Sprint@yahoogroups.com
Subject: [AT_Sprint] Re: "Nothing but a tweezers."

I built the ATS3A not using Cash Olsen's method. The first tool I bought was the micro fine tweezers (EROP5SA) and after soldering several parts I got round to installing U7 and held it with the tweezers only to have them slip and have the chip fly off somewhere. I never did find it, so it's still in my shack somewhere. Steve tells me that chip happens to be the most expensive part in the rig. Also had that happen with a couple of resistors.

SO NO MORE TWEEZERS FOR ME!

I finished using beeswax and toothpicks. A dab under the component to hold it in place and a dab on top to carry it (not sure who recommended that method....may have been Steve). Worked out well for me. Also have used the "Doofus" and that worked out well also.

Otherwise I used a Hakko 936 with the their smallest tip at 700 degs and RShack .015" solder. My 70 year old eyes needed as much "lighted" magnification as I could find, both bench fixed and handheld.

A Great rig and in my opinion and the only one for Spartan Sprint and that's all I use it for. Great design Steve, carry on the good work. BTW, I have also built a K2, K1 and a KX-1.

One of these days I'll get round to using W1MT's firmware.

73, Dave NE5DL

1622. Re: [AT_Sprint] Re: 'Nothing but a tweezers.'

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-21 15:23:36 UTC
From: w9ya@qrparci.net
Topic: 1577 Message: 1622

Hey Dave and the gang;

I have been using blu-tack for holding the larger and/or many legged devices. I got the idea from a posting on another email reflector years ago.

But the beeswax idea appeals to me as the solvents I do my final board cleaning with should probably take care of any residue nicely.

With the blu-tack I end up removing it by rolling it back up shortly after the soldering is done, so I have to be careful where I use it, which is generally around the ends only.

Thanks for the great info !!

Vy 72;

Bob
w9ya

P.S.... The very best tweezers are NOT some particular brand or model someone else recommends, but rather the ones that *you* will not go flinging parts around the room with. And I am beginning to believe that the tweezers are an incredibly personal choice as not everyone has the same kind of fine-motor skills.

Personally I like ones where the tips are so fine I have to realign them form time to time because I am bending them out of shape. I get the best holding from those kinds of tips. YMMV of course.

> I built the ATS3A not using Cash Olsen's method. The first tool I
> bought was the micro fine tweezers (EROP5SA) and after soldering
> several parts I got round to installing U7 and held it with the
> tweezers only to have them slip and have the chip fly off somewhere. I
> never did find it, so it's still in my shack somewhere. Steve tells me
> that chip happens to be the most expensive part in the rig. Also had
> that happen with a couple of resistors.
>
> SO NO MORE TWEEZERS FOR ME!
>
> I finished using beeswax and toothpicks. A dab under the component to
> hold it in place and a dab on top to carry it (not sure who
> recommended that method....may have been Steve). Worked out well for me.
> Also have used the "Doofus" and that worked out well also.
>
> Otherwise I used a Hakko 936 with the their smallest tip at 700 degs and
> RShack .015" solder. My 70 year old eyes needed as much "lighted"

> magnification as I could find, both bench fixed and handheld.
>
> A Great rig and in my opinion and the only one for Spartan Sprint and
> that's all I use it for. Great design Steve, carry on the good work.
> BTW, I have also built a K2, K1 and a KX-1.
>
> One of these days I'll get round to using W1MT's firmware.
>
> 73, Dave NE5DL

1623. Still Accepting Pre-orders?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-21 17:31:05 UTC
From: Matt
Topic: 1623 Message: 1623

Is steve still accepting preorders for the next run? just thought i would ask before i mailed my check.

Matt
KD8DAO

1624. Re: [AT_Sprint] The easy way to solder small items

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-21 18:46:39 UTC
From: Karl Larsen
Topic: 1617 Message: 1624

Karl Larsen wrote:
> All this talk about liquid flux and special rigs to hold the chip
> while you manual solder the thing makes me weak at my knees. There is a
> lot better way to do this. Look at:
>
> http://www.zianet.com/erg/SMT_Soldering.html
>
> and see how cheap and easy it is to use this method. The solder-paste
> costs $5.00 and it is enought to build this and the ATS3E :-)
>
>
I got my hypo with the solder paste from Cash over coffee at Mc
Donald's in Wal Mart this morning and printed the Manual with my wife's
printer that works in color. I see the pictures mentioned that tell you
where everything goes in living color.

Someone got their ATS3B done in 2 hours. At 72 years old and busy
with the Red Chile harvest so it will take a lot longer. But I will get
done shakes and all.

--

Karl F. Larsen, AKA K5DI
Linux User
#450462 http://counter.li.org.

1625. Re: [AT_Sprint] Re: Liquid flux pen.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-21 19:22:47 UTC
From: Mark Brueggemann
Topic: 1577 Message: 1625

--- w9ya@... wrote:

> IF I am being really anal-retentive,

"If" -?

Mark K5LXP
Albuquerque, NM

1626. Re: [AT_Sprint] Re: Liquid flux pen.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-21 21:17:19 UTC
From: w9ya@qrparci.net
Topic: 1577 Message: 1626

>
> --- w9ya@... wrote:
>
>> IF I am being really anal-retentive,
>
> "If" -?
>
>
>
> Mark K5LXP
> Albuquerque, NM

Boy with friends like you.....

Liviu Librescu - ?n veci pomenirea lui.
(May his memory be eternal.)

1627. Re: [AT_Sprint] The easy way to solder small items

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-21 21:19:08 UTC
From: w9ya@qrparci.net
Topic: 1617 Message: 1627

> Karl Larsen wrote:
>> All this talk about liquid flux and special rigs to hold the chip
>> while you manual solder the thing makes me weak at my knees. There is
>> a lot better way to do this. Look at:
>>
>> http://www.zianet.com/erg/SMT_Soldering.html
>>
>> and see how cheap and easy it is to use this method. The solder-paste
>> costs $5.00 and it is enought to build this and the ATS3E :-)
>>
>>
> I got my hypo with the solder paste from Cash over coffee at Mc
> Donald's in Wal Mart this morning and printed the Manual with my wife's
> printer that works in color. I see the pictures mentioned that tell you
> where everything goes in living color.
>
> Someone got their ATS3B done in 2 hours. At 72 years old and busy
> with the Red Chile harvest so it will take a lot longer. But I will get
> done shakes and all.
>
>
>
> --
>
> Karl F. Larsen, AKA K5DI
> Linux User
> #450462 http://counter.li.org.

I thought you were either selling this or returning it to Steve ?

?????

Bob'
w9ya

Liviu Librescu - ?n veci pomenirea lui.
(May his memory be eternal.)

1628. "Tee Pin"

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-21 23:08:17 UTC
From: Ken Evans
Topic: 1628 Message: 1628

Someone posted a picture of a Tee pin as a hold down for SMT. Lost the original email, but would like to know where you obtained the Tee Pin?

Ken Evans, W4DU
QRP ARCI 696, GQRP 5918, FP 295, NOGA, ARRL Life

1629. Re: [AT_Sprint] The easy way to solder small items

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-22 00:27:16 UTC
From: Karl Larsen
Topic: 1617 Message: 1629

w9ya@... wrote:
>> Karl Larsen wrote:
>>
>>> All this talk about liquid flux and special rigs to hold the chip
>>> while you manual solder the thing makes me weak at my knees. There is
>>> a lot better way to do this. Look at:
>>>
>>> http://www.zianet.com/erg/SMT_Soldering.html
>>>
>>> and see how cheap and easy it is to use this method. The solder-paste
>>> costs $5.00 and it is enought to build this and the ATS3E :-)
>>>
>>>
>>>
>> I got my hypo with the solder paste from Cash over coffee at Mc
>> Donald's in Wal Mart this morning and printed the Manual with my wife's
>> printer that works in color. I see the pictures mentioned that tell you
>> where everything goes in living color.
>>
>> Someone got their ATS3B done in 2 hours. At 72 years old and busy
>> with the Red Chile harvest so it will take a lot longer. But I will get
>> done shakes and all.
>>
>>
>>
>> --
>>
>> Karl F. Larsen, AKA K5DI
>> Linux User
>> #450462 http://counter.li.org.
>>
>
> I thought you were either selling this or returning it to Steve ?
>
> ?????
>
> Bob'
> w9ya
>
>
> Liviu Librescu - ?n veci pomenirea lui.
> (May his memory be eternal.)
>
>
>

>
>
> Yahoo! Groups Links
>
>
>
>
>
>
Nope. I have the back side of the board almost ready for soldering.
I am having a little trouble with the errors in the manual. But I have
it figured out but wasted a lot of time!

But if the back side solders good the whole thing will be done
Saturday if I can find time. My shaky hands are doing ok with this
method and I have 3 twezzers.

--

Karl F. Larsen, AKA K5DI
Linux User
#450462 http://counter.li.org.

1630. Re: The easy way to solder small items

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-22 00:54:24 UTC
From: Bruce Beford
Topic: 1617 Message: 1630

--- In AT_Sprint@yahoogroups.com, Karl Larsen <k5di@...> wrote:

> I am having a little trouble with the errors in the manual. But I
> have it figured out but wasted a lot of time!

Glad it's coming along, Karl. Which errors in the manual gave you
trouble?

-Bruce N1RX

1631. NJQRP Homebrewr Sprint this Sunday night!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-22 02:08:46 UTC
From: Larry Makoski
Topic: 1631 Message: 1631

It's that time of year, again! Time for the Fall edition of the NJQRP Homebrewer Sprint. It will be held this Sunday night (Monday morning UTC time). So put on your headphones, grab your key and come join us for a spell. Work a half-hour, work an hour, work all four! The point is to join in and have some fun!

This time, however, this will be a CW ONLY event, due to the lack of PSK-31 entries.

Mission: Promote homebrewed & homemade equipment on the air together. Kits are considered homebrew. Anyone with ANY equipment can enter; and is highly encouraged to do so!

Sponsor: New Jersey QRP Club (http://www.njqrp.org)

When: The fourth Monday in March and in September, 0000-0400 UTC (Sunday evening in USA/Canada)

Modes: CW only, starting this edition, QRP friendly frequencies recommended on 80, 40, 20, 15 and 10 meters.

Exchange: RST - State/Province/Country - Power out

QSO Points:
2 Commercial Equipment
3 Homebrew Xmtr or Rcvr
4 Homebrew Xmtr AND Rcvr or Xcvr
(Kits are okay for homebrew)

Power Mult: The highest power used during the contest determines the multiplier ...
a) >5W = X1
b) >1-5W = X7
c) >250mW - 1W = X10
d) 250mW or less = X15

Multiplier: State/Province/Country for all bands. The same station may be worked on more than one band for QSO points and SPC credit.

SCORE: Points(total for all bands)
x SPC (total for all bands)
x power multiplier.

Awards: Awards: Special certificates will be awarded.

Results: Sprint results will be published on the NJQRP Web pages

Logs: Entries must be received by 30 days from the contest. The log sheets and summary should be included. E-mail logs are accepted in text form. (No word processor files etc). Also paper logs are ok. Include an SASE or E-mail address for the results, if desired. Please include your Soapbox info with your equipment and exploits.

Send logs to:

Larry Makoski, W2LJ
327 Clinton Place
South Plainfield, NJ 07080

or send by email to w2lj@...

Spring 2007 Results

N4BP Bob 19964 pts
WG7Y Bob 7772 pts
KR1S Jim 5824 pts
KG4W Ed 3570 pts
AB1AV Bill 2268 pts
KD2MX Paul 1792 pts
WB8LZG Gregg 1512 pts
K8KFJ Gary 840 pts
W1PID Jim 224 pts
W5ESE Scott 168 pts
VE3HUR Don 112 pts

Soapbox:

I didn't hear much except static crashes - no AGC isn't nice on the eardrums! - VE3HUR

Where was the activity??? Quit after the first two hours for lack of anyone to work. - N4BP

I set up my DSWs and listened for the first half hour on 40 and 80. I didn't hear anyone playing! So I quit. Then I thought, " I can't quit." So I listened on 40 with the FT-900. There was Bob, N4BP. The only player. I worked him and quit again. Then I listened again an hour later. 40 was very dead. But Bob had moved to 80 and I worked him there. Then I picked up Bill AB1AV and KG4W in VA. So I quit this sprint 3 times. - W1PID

Thanks for a fun contest. But where did everyone go after 0200Z??? I guess conditions really went downhill after that, but tried to keep going right to the end. Big surprise was WB8LZG, who I was sure was QRO, he was so loud. Really enjoyed getting a 119 from Bulgaria! - KR1S

My 20m antenna isn't the greatest so I decided to fire up on 40m. I was hoping I'd find enough Qs there to keep me somewhat busy. However, that didn't turn out to be the case. Since I didn't have 80m in the K1, I decided to stick it out there on 40 for a bit but the sparce activity continued. I never did get to work any west coast stations. I heard K7TQ work N4BP but then he disappeared. Anyway, I thank the sponsor for this event and the opportunity to
work other homebrewers and play radio. - K8KFJ

Participation seemed light, or perhaps propagation only covered the East Coast. N4BP was loud as usual, but KD2MX was really booming in. Maybe I'm not a contester, since I quit at bedtime, but I was glad to catch this sprint. - AB1AV

This is my entry for the HB Sprint on Sunday night 3-25-07. This is my 1st effort in the event.
- KG4W

The bands were very noisy and I lost a couple of potential QSOs in the QRN. Seemed like activity was way off from last year or conditions were worse then they seemed as QSOs were few and far between. - KD2MX

Very gud signals on the band tonight. W4QO was booming into Michigan with just 400mw ! WOW ! Great signal. Band went long abt 0130 Z here. Lots of fun es a gud turnout. - WB8LZG

Thanks alot for sponsoring the event. Didn't hear much activity, but decided to send in a log anyway. - W5ESE

--
73 de Larry W2LJ
QRP - When you care to send the very least!

http://www.w2lj.qrpradio.com
http://w2lj.blogspot.com/

1632. I'll never clip the leads of a through-hole part again!!!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-22 03:34:19 UTC
From: John Shadle
Topic: 1632 Message: 1632

OK. So, I just successfully completed the NorCal dummy load to practice SMD soldering and...what can I say? I'm hooked!

I'm selling my vise, I'm throwing away my wire cutters, and I'm tossing out any solder larger than .015"!

(So, I'm only halfway joking.)

I want to get one more SMD practice project under my belt before I tackle my QBSA and ATS-3B, but completing the NorCal Dummy Load sure boosted my confidence. :)

Why was I so afraid of this?

My technique was to tin one of the pads, place the part with tweezers, use the "doofus" to hold down the part while I warmed the tinned pad, removed the "doofus", then finished by soldering the other pad. Voila!

Thanks for all the tips, guys. Can't wait to move on to better things!

'night.
-john W4PAH

1633. Re: [AT_Sprint] Re: The easy way to solder small items

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-22 11:55:23 UTC
From: Karl Larsen
Topic: 1617 Message: 1633

Most problem Bruce is with the tiny 3 and 4 legged IC's. The color is
the only thing to use but I find a large? Green colored chip carrier has
a 4 leg chip and the spot on the board is for a 3 leg. Stuff like that.
It makes it VERY slow going.

Bruce Beford wrote:
> --- In AT_Sprint@yahoogroups.com, Karl Larsen <k5di@...> wrote:
>
>
>> I am having a little trouble with the errors in the manual. But I
>> have it figured out but wasted a lot of time!
>>
>
> Glad it's coming along, Karl. Which errors in the manual gave you
> trouble?
>
> -Bruce N1RX
>
>
>
>
> Yahoo! Groups Links
>
>
>
>
>
>
>

--

Karl F. Larsen, AKA K5DI
Linux User
#450462 http://counter.li.org.

1634. Re: The easy way to solder small items

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-22 13:49:19 UTC
From: Dave
Topic: 1617 Message: 1634

> Green colored chip carrier has
> a 4 leg chip and the spot on the board is for a 3 leg.

Uh, there are no 4-lead SMT parts that I know of in the kit other than the oscillator (unless you count the heat-sink tab on the regulators and Q6). If you are referring to U11 on the bottom of the board (not to be confused with U11 on the top, the oscillator), it's a three-terminal SOT-23 device.

Dave, WA3OFF

1635. Consolidated manual corrections?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-22 13:55:18 UTC
From: john
Topic: 1577 Message: 1635

Is there a list, or document somewhere with all the manual/schematic corrections for the 3B? I"m itchin' to get started!

John K5MO

1636. Straight key operation lost after "E"

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-22 13:58:21 UTC
From: Dave
Topic: 1636 Message: 1636

The present version of the 3B code forgets that it is in straight-key mode if the overcurrent protection trips. The straight-key mode bit FL_STRKEY is in the "flags" word which gets cleared. I'm not entirely sure that there aren't other things that are not retained, like DDS settings; the audio seems to sound different after hitting the Menu button after the trip.

Dave, WA3OFF

1637. Re: [AT_Sprint] Re: The easy way to solder small items

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-22 14:01:18 UTC
From: Karl Larsen
Topic: 1617 Message: 1637

Hi Dave, no my problem I see now is that there are TWO Orange and Green devices. One is small and the other is large. I looked at the picture of the one Steve made and I *THINK* I might have the right ones selected now hope hope.

It is all changeable because I have not soldered the bottom yet. Trying to get it right :-)

And yes 2 U11 do confuse old men too.

Dave wrote:
>> Green colored chip carrier has
>> a 4 leg chip and the spot on the board is for a 3 leg.
>>
>
> Uh, there are no 4-lead SMT parts that I know of in the kit other
> than the oscillator (unless you count the heat-sink tab on the
> regulators and Q6). If you are referring to U11 on the bottom of the
> board (not to be confused with U11 on the top, the oscillator), it's
> a three-terminal SOT-23 device.
>
> Dave, WA3OFF
>
>
>
>
> Yahoo! Groups Links
>
>
>
>
>
>
>

--

Karl F. Larsen, AKA K5DI
Linux User
#450462 http://counter.li.org.

1638. Stereo jacks not as sturdy...

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-22 14:07:37 UTC
From: Dave
Topic: 1638 Message: 1638

... as the ones that came with my 3A. I have one that the back pops out of when I insert the plug (I did, however, desolder and reinstall both of these jacks, so perhaps it just doesn't tolerate that as well). You might consider switching back to your previous source for future kits; those were quite nice.

Dave, WA3OFF

1639. Fwd: [CW] NJQRP Homebrewer Sprint this Sunday!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-22 17:02:45 UTC
From: scott mcmullen
Topic: 1639 Message: 1639

Looks like a fun event for anyone with homebrew or kit gear.

73
Scott
W5ESE

--- Larry Makoski <Makos327@...> wrote:

> Date: Fri, 21 Sep 2007 22:11:23 -0400
> From: Larry Makoski <Makos327@...>
> To: "cw@..." <cw@...>
> Subject: [CW] NJQRP Homebrewer Sprint this Sunday!
>
> It's that time of year, again! Time for the Fall edition of the NJQRP
> Homebrewer Sprint. It will be held this Sunday night (Monday morning UTC
> time). So put on your headphones, grab your key and come join us for a
> spell. Work a half-hour, work an hour, work all four! The point is to
> join in and have some fun!
>
> This time, however, this will be a CW ONLY event, due to the lack of
> PSK-31 entries.
>
> Mission: Promote homebrewed & homemade equipment on the air
> together. Kits are considered homebrew. Anyone with ANY equipment can
> enter; and is highly encouraged to do so!
>
> Sponsor: New Jersey QRP Club (http://www.njqrp.org)
>
> When: The fourth Monday in March and in September, 0000-0400 UTC
> (Sunday evening in USA/Canada)
>
> Modes: CW only, starting this edition, QRP friendly frequencies
> recommended on 80, 40, 20, 15 and 10 meters.
>
> Exchange: RST - State/Province/Country - Power out
>
> QSO Points:
> 2 Commercial Equipment
> 3 Homebrew Xmtr or Rcvr
> 4 Homebrew Xmtr AND Rcvr or Xcvr
> (Kits are okay for homebrew)
>
> Power Mult: The highest power used during the contest determines the
> multiplier ...
> a) >5W = X1
> b) >1-5W = X7

> c) >250mW - 1W = X10
> d) 250mW or less = X15
>
> Multiplier: State/Province/Country for all bands. The same station may
> be worked on more than one band for QSO points and
> SPC credit.
>
> SCORE: Points(total for all bands)
> x SPC (total for all bands)
> x power multiplier.
>
> Awards: Awards: Special certificates will be awarded.
>
> Results: Sprint results will be published on the NJQRP Web pages
>
> Logs: Entries must be received by 30 days from the contest. The log
> sheets and summary should be included. E-mail logs are accepted in text
> form. (No word processor files etc). Also paper logs are ok. Include an
> SASE or E-mail address for the results, if desired. Please include your
> Soapbox info with your equipment and exploits.
>
> Send logs to:
>
> Larry Makoski, W2LJ
> 327 Clinton Place
> South Plainfield, NJ 07080
>
> or send by email to w2lj@...
>
> Spring 2007 Results
>
> N4BP Bob 19964 pts
> WG7Y Bob 7772 pts
> KR1S Jim 5824 pts
> KG4W Ed 3570 pts
> AB1AV Bill 2268 pts
> KD2MX Paul 1792 pts
> WB8LZG Gregg 1512 pts
> K8KFJ Gary 840 pts
> W1PID Jim 224 pts
> W5ESE Scott 168 pts
> VE3HUR Don 112 pts
>
> Soapbox:
>
> I didn't hear much except static crashes - no AGC isn't nice
> on the eardrums! - VE3HUR
>
> Where was the activity??? Quit after the first two hours for lack of
> anyone to work. - N4BP

>
> I set up my DSWs and listened for the first half hour on 40 and 80. I didn't hear anyone
> playing! So I quit. Then I thought, " I can't quit." So I listened on 40 with the FT-900.
There
> was Bob, N4BP. The only player. I worked him and quit again. Then I listened again an
hour
> later. 40 was very dead. But Bob had moved to 80 and I worked him there. Then I picked up
Bill
> AB1AV and KG4W in VA. So I quit this sprint 3 times. - W1PID
>
> Thanks for a fun contest. But where did everyone go after 0200Z??? I guess conditions
really
> went downhill after that, but tried to keep going right to the end. Big surprise was
WB8LZG, who
> I was sure was QRO, he was so loud. Really enjoyed getting a 119 from Bulgaria! - KR1S
>
> My 20m antenna isn't the greatest so I decided to fire up on 40m. I was hoping I'd find
enough
> Qs there to keep me somewhat busy. However, that didn't turn out to be the case. Since I
> didn't have 80m in the K1, I decided to stick it out there on 40 for a bit but the sparce
> activity continued. I never did get to work any west coast stations. I heard K7TQ work
N4BP
> but then he disappeared. Anyway, I thank the sponsor for this event and the opportunity
to
> work other homebrewers and play radio. - K8KFJ
>
> Participation seemed light, or perhaps propagation only covered the East Coast. N4BP was
loud
> as usual, but KD2MX was really booming in. Maybe I'm not a contester, since I quit at
bedtime,
> but I was glad to catch this sprint. - AB1AV
>
> This is my entry for the HB Sprint on Sunday night 3-25-07. This is my 1st effort in the
event.
> - KG4W
>
> The bands were very noisy and I lost a couple of potential QSOs in the QRN. Seemed like
activity
> was way off from last year or conditions were worse then they seemed as QSOs were few and
far
> between. - KD2MX
>
> Very gud signals on the band tonight. W4QO was booming into Michigan with just 400mw !
WOW !
> Great signal. Band went long abt 0130 Z here. Lots of fun es a gud turnout. - WB8LZG
>
> Thanks alot for sponsoring the event. Didn't hear much activity, but decided to send in a
log
> anyway. - W5ESE
>

> --
> 73 de Larry W2LJ
> QRP - When you care to send the very least!
>
> http://www.w2lj.qrpradio.com
> http://w2lj.blogspot.com/
>
> _____
> CW mailing list
> CW@...
> http://mailman.qth.net/mailman/listinfo/cw
>

_____
Don't let your dream ride pass you by. Make it a reality with Yahoo! Autos.
http://autos.yahoo.com/index.html

1640. Cash Olsen method

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-22 23:52:20 UTC
From: Karl Larsen
Topic: 1640 Message: 1640

Hi guys, I lost the diode trying to open the dam package! I was trying to get my tweezer into the package and get the TINY diode out but it went airborn. Only thing so far so will be more careful.

I cooked the back side of the board and it looks great! But I had some errors. A couple of devices didn't do right and I used 300% too much solder paste on two IC's and there are big solder bridges. I will fix this tomorrow as I can.

Even with the problems it's a good looking backside and it will work when fixed.

--

Karl F. Larsen, AKA K5DI
Linux User
#450462 http://counter.li.org.

1641. Re: [AT_Sprint] Cash Olsen method

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-23 00:31:34 UTC
From: John A. Evans - N0HJ
Topic: 1640 Message: 1641

Sorry, Karl, that's just too much information. ;)

72 - john - n0hj

Karl Larsen wrote:
>
>
>
> Even with the problems it's a good looking backside and it will work
> when fixed.
>
> --
>

1642. Show, don't tell. Possible?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-23 10:48:43 UTC
From: kc7fys
Topic: 1640 Message: 1642

--- In AT_Sprint@yahoogroups.com, Karl Larsen <k5di@...> wrote:
> I cooked the back side of the board and it looks great!
> Even with the problems it's a good looking backside and it will
work
> when fixed.

Karl, OM, your impressions of how it looks are wonderful to hear, but
a picture speaks a thousand words. Is it possible to 'show not tell'
in this case?
VY 73,
Jonathan

1643. Re: [AT_Sprint] Show, don't tell. Possible?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-23 11:44:12 UTC
From: Karl Larsen
Topic: 1640 Message: 1643

kc7fys wrote:
> --- In AT_Sprint@yahoogroups.com, Karl Larsen <k5di@...> wrote:
>
>> I cooked the back side of the board and it looks great!
>> Even with the problems it's a good looking backside and it will
>>
> work
>
>> when fixed.
>>
>
> Karl, OM, your impressions of how it looks are wonderful to hear, but
> a picture speaks a thousand words. Is it possible to 'show not tell'
> in this case?
> VY 73,
> Jonathan
>
>
>
>
>
> Yahoo! Groups Links
>
>
>
>
>
>
>

Yes I did take a couple of pictures and can upload them to this
place like others have done. I will do so but have been busy. I would
like to point out the general success and the problems as well. And all
Problems are easy to fix.

--

Karl F. Larsen, AKA K5DI
Linux User
#450462 http://counter.li.org.

1644. Re: [AT_Sprint] Show, don't tell. Possible?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-23 14:45:20 UTC
From: Karl Larsen
Topic: 1640 Message: 1644

Karl Larsen wrote:
> kc7fys wrote:
>
>> --- In AT_Sprint@yahoogroups.com, Karl Larsen <k5di@...> wrote:
>>
>>
>>> I cooked the back side of the board and it looks great!
>>> Even with the problems it's a good looking backside and it will
>>>
>>>
>> work
>>
>>
>>> when fixed.
>>>
>>>
>> Karl, OM, your impressions of how it looks are wonderful to hear, but
>> a picture speaks a thousand words. Is it possible to 'show not tell'
>> in this case?
>> VY 73,
>> Jonathan
>>
>>
>>
>>
>>
>> Yahoo! Groups Links
>>
>>
>>
>>
>>
>>
>>
>>
> Yes I did take a couple of pictures and can upload them to this
> place like others have done. I will do so but have been busy. I would
> like to point out the general success and the problems as well. And all
> Problems are easy to fix.
>
>
>
>
I put the picture on Yahoo but it didn't do anything. It is there
but not right somehow. So go here and you can see the picture. Looks
like a pan with a rig in it:

http://ph.groups.yahoo.com/group/AT_Sprint/photos/view/27c7?b=4

--

Karl F. Larsen, AKA K5DI
Linux User
#450462 http://counter.li.org.

1645. Re: Straight key operation lost after "E"

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-23 19:31:05 UTC
From: Dave
Topic: 1636 Message: 1645

> other things that are not retained, like DDS settings

Actually, the settings are retained but the DDS's reset bit is not cleared when the Menu button is pressed. I think it gets cleared upon transmitting successfully, but I've changed the code in my 3B to clear the reset bit when the Menu button is pressed. This restores Rx operation. I've also changed the code to retain straight-key mode.

Dave

1646. [CW] NJQRP Homebrewer Sprint this Sunday!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-23 20:21:31 UTC
From: scott mcmullen
Topic: 1646 Message: 1646

Looks like a fun event for anyone with homebrew or kit gear.

73
Scott
W5ESE

--- Larry Makoski <Makos327@...> wrote:

> Date: Fri, 21 Sep 2007 22:11:23 -0400
> From: Larry Makoski <Makos327@...>
> To: "cw@..." <cw@...>
> Subject: [CW] NJQRP Homebrewer Sprint this Sunday!
>
> It's that time of year, again! Time for the Fall edition of the
NJQRP

> Homebrewer Sprint. It will be held this Sunday night (Monday morning
UTC
> time). So put on your headphones, grab your key and come join us for
a
> spell. Work a half-hour, work an hour, work all four! The point is
to

> join in and have some fun!
>
> This time, however, this will be a CW ONLY event, due to the lack
of
> PSK-31 entries.
>
> Mission: Promote homebrewed & homemade equipment on the air
> together. Kits are considered homebrew. Anyone with ANY equipment
can

> enter; and is highly encouraged to do so!
>
> Sponsor: New Jersey QRP Club (http://www.njqrp.org)
>
> When: The fourth Monday in March and in September, 0000-0400 UTC
> (Sunday evening in USA/Canada)
>
> Modes: CW only, starting this edition, QRP friendly frequencies
> recommended on 80, 40, 20, 15 and 10 meters.
>
> Exchange: RST - State/Province/Country - Power out
>
> QSO Points:

> 2 Commercial Equipment
> 3 Homebrew Xmtr or Rcvr
> 4 Homebrew Xmtr AND Rcvr or Xcvr
> (Kits are okay for homebrew)
>
> Power Mult: The highest power used during the contest determines
the

> multiplier ...
> a) >5W = X1
> b) >1-5W = X7
> c) >250mW - 1W = X10
> d) 250mW or less = X15
>
> Multiplier: State/Province/Country for all bands. The same station
may
> be worked on more than one band for QSO points and
> SPC credit.
>
> SCORE: Points(total for all bands)
> x SPC (total for all bands)
> x power multiplier.
>
> Awards: Awards: Special certificates will be awarded.
>
> Results: Sprint results will be published on the NJQRP Web pages
>
> Logs: Entries must be received by 30 days from the contest. The
log
> sheets and summary should be included. E-mail logs are accepted in
text
> form. (No word processor files etc). Also paper logs are ok.
Include
an
> SASE or E-mail address for the results, if desired. Please include
your
> Soapbox info with your equipment and exploits.
>
> Send logs to:
>
> Larry Makoski, W2LJ
> 327 Clinton Place
> South Plainfield, NJ 07080
>
> or send by email to w2lj@arrl.net

1647. Photo's on Yahoo are dead

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-23 21:50:40 UTC
From: Karl Larsen
Topic: 1647 Message: 1647

I read the thing on the Group's photo section and it says there will
be no more photo things on Yahoo. I expect that is because millions take
real space.

--

Karl F. Larsen, AKA K5DI
Linux User
#450462 http://counter.li.org.

1648. Re: Photo's on Yahoo are dead

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-23 22:54:28 UTC
From: Bruce Beford
Topic: 1647 Message: 1648

--- In AT_Sprint@yahoogroups.com, Karl Larsen <k5di@...> wrote:
>
> I read the thing on the Group's photo section and it says there
will
> be no more photo things on Yahoo. I expect that is because millions
take
> real space.
>
>
> --
>
> Karl F. Larsen, AKA K5DI
> Linux User
> #450462 http://counter.li.org.
>

Wrong, Karl.

there will be no change in the Photo hosting on the Yahoo groups.
Read this notice at the top of every Yahoo Groups' Photos page:

Yahoo! Groups photos will NOT be affected by the closure of Yahoo!
Photos on September 20th. Yahoo! Groups photos will continue to work
as they do today.

-Bruce N1RX

1649. RE: [AT_Sprint] [CW] NJQRP Homebrewer Sprint this Sunday!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-24 03:41:06 UTC
From: andrew.macallister@emersonprocess.com
Topic: 1646 Message: 1649
Attachments: 1 described; binary payloads are missing from this source WARC

I was there with my ATS-3A! Since this wasn't a Spartan Sprint, I ran heavy on the xmit for the first hour and only managed to make 10 Q's on 40M. Since I only have a pair of 200 maH LiPo's, I had to go to the charger for a while. When I came back, there was no one to be found. I was supposed to be soldering on my ATS-3B, but the lure of a contest overcame the urge...

72 de Andy W5ACM

From: AT_Sprint@yahoogroups.com on behalf of scott mcmullen
Sent: Sun 9/23/2007 3:21 PM
To: AT_Sprint@yahoogroups.com
Subject: [AT_Sprint] [CW] NJQRP Homebrewer Sprint this Sunday!

Looks like a fun event for anyone with homebrew or kit gear.

73
Scott
W5ESE

--- Larry Makoski <Makos327@... <mailto:Makos327%40worldnet.att.net> > wrote:

> Date: Fri, 21 Sep 2007 22:11:23 -0400
> From: Larry Makoski <Makos327@... <mailto:Makos327%40worldnet.att.net> >
> To: "cw@... <mailto:cw%40mailman.qth.net> " <cw@mailman.qth.net
<mailto:cw%40mailman.qth.net> >
> Subject: [CW] NJQRP Homebrewer Sprint this Sunday!
>
> It's that time of year, again! Time for the Fall edition of the
NJQRP

> Homebrewer Sprint. It will be held this Sunday night (Monday morning
UTC
> time). So put on your headphones, grab your key and come join us for
a
> spell. Work a half-hour, work an hour, work all four! The point is
to

> join in and have some fun!
>

.

1650. Re: Show, don't tell. Possible?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-24 10:19:18 UTC
From: kc7fys
Topic: 1640 Message: 1650

--- In AT_Sprint@yahoogroups.com, Karl Larsen <k5di@...> wrote:
>
> Karl Larsen wrote:
> > kc7fys wrote:
> I put the picture on Yahoo but it didn't do anything. It is there
> but not right somehow. So go here and you can see the picture. Looks
> like a pan with a rig in it:

Thanks, Karl.
This size of a project really tests the macro-focus of all our
cameras. You'd practically need a jeweler's camera, I suppose.
Thanks!
Jonathan

1651. Re: Photo's on Yahoo are dead

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-24 10:20:59 UTC
From: kc7fys
Topic: 1647 Message: 1651

The good news in this respect is that flickr is taking the place of this--and it's simple to use and robust in features.
See you there!
Jonathan

1652. Re: Straight key operation lost after "E"

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-24 13:12:49 UTC
From: Dave
Topic: 1636 Message: 1652

Here are the code changes I made.

For straight-key:

```
clr &flags
```

becomes

```
bic.b #(~FL_STRKEY),flags
```

and

```
rst2: bit.b #PI_DAH
jc rst3
bis #FL_STRKEY,&flags
```

becomes

```
rst2: bic #FL_STRKEY,&flags
bit.b #PI_DAH
jc rst3
bis #FL_STRKEY,&flags
```

For the DDS reset:

```
ov_1: bit.b #PI_MENU
jnc ov_1
jmp wait1
```

becomes

```
ov_1: bit.b #PI_MENU
jnc ov_1
mov #02000h,r15 ;turn off DDS chip reset
call #out16
jmp wait1
```

Dave

1653. Re: [AT_Sprint] Re: Straight key operation lost after "E"

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-24 14:04:24 UTC
From: mbhayden
Topic: 1636 Message: 1653
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

1654. Re: [AT_Sprint] Re: Straight key operation lost after "E"

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-24 14:04:57 UTC
From: John A. Evans - N0HJ
Topic: 1636 Message: 1654

Check out Mike's page at http://w1mt.qrpradio.com/ats3.html

72 - john - n0hj

mbhayden wrote:
>
> very useful. what tools are necessary to make changes like this once
> you've got a 3b up and running?
>
> mike, ak3f
>

1655. FS: ATS-3

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-24 19:10:11 UTC
From: mdgolfbum
Topic: 1655 Message: 1655

ATS-3: built in Altoids tin. No HW mods. Firmware is W1MT from 2006 Atlanticon. Can update to latest if desired.

Includes SMA-BNC cable for output, power connector to 9V snap, holder for 8 AA w/ 9V snap, power cable with PowerPoles.

Works good! $160 shipped.

jim ab3cv

1656. For Sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-24 22:05:32 UTC
From: Karl Larsen
Topic: 1656 Message: 1656

I have now proven that my 72 year old eyes both with plastic fix
focused lens will not make it. I tried to fix the solder job on the
AD9834 chip. For some reason, likely that I had too much solder laden
paste on that chip. But to be honest I can't really see the gray paste.
Anyway I reheated the board and got the AD9834 off and tried to hand
solder it. I have had great success on 2 ATS-3 kits. It just did not work.

I have everything in 4 Zip-Lock bags. They have all the hardware and
the cd-rom, all the resistors for the front of the board, all the
capacitors left for top and maybe for some other place, and the main
board with the AD9834 mounted wrong, and the AC02 chip and one resistor
loose in the bag.

I think anyone with a good iron and solder wick can fix the bottom
board in short order if they can see the components. I for sure can not.

For $100.00 I will mail you the whole kit as is. I want the money
via paypal or a check mailed to Karl Larsen, K5DI, 3310 East Street, Las
Cruces, NM 88005. Of course I need your address as well :-)

--

Karl F. Larsen, AKA K5DI
Linux User
#450462 http://counter.li.org.

1657. Re: [AT_Sprint] For Sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-24 22:15:48 UTC
From: n0tu/Steve
Topic: 1656 Message: 1657

Karl, I'll take it!!! Steve/n0tu

On 9/24/07, Karl Larsen <k5di@...> wrote:
> I have now proven that my 72 year old eyes both with plastic fix
> focused lens will not make it. I tried to fix the solder job on the
> AD9834 chip. For some reason, likely that I had too much solder laden
> paste on that chip. But to be honest I can't really see the gray paste.
> Anyway I reheated the board and got the AD9834 off and tried to hand
> solder it. I have had great success on 2 ATS-3 kits. It just did not work.
>
> I have everything in 4 Zip-Lock bags. They have all the hardware and
> the cd-rom, all the resistors for the front of the board, all the
> capacitors left for top and maybe for some other place, and the main
> board with the AD9834 mounted wrong, and the AC02 chip and one resistor
> loose in the bag.
>
> I think anyone with a good iron and solder wick can fix the bottom
> board in short order if they can see the components. I for sure can not.
>
> For $100.00 I will mail you the whole kit as is. I want the money
> via paypal or a check mailed to Karl Larsen, K5DI, 3310 East Street, Las
> Cruces, NM 88005. Of course I need your address as well :-)
>
>
> --
>
> Karl F. Larsen, AKA K5DI
> Linux User
> #450462 http://counter.li.org.
>
>
>
>
> Yahoo! Groups Links
>
>
>
>

1658. Re: [AT_Sprint] For Sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-24 22:17:30 UTC
From: n0tu/Steve
Topic: 1656 Message: 1658

I can MO tomorrow AM f you want?

On 9/24/07, n0tu/Steve <n0tu.qrp@...> wrote:
> Karl, I'll take it!!! Steve/n0tu
>
> On 9/24/07, Karl Larsen <k5di@...> wrote:
> > I have now proven that my 72 year old eyes both with plastic fix
> > focused lens will not make it. I tried to fix the solder job on the
> > AD9834 chip. For some reason, likely that I had too much solder laden
> > paste on that chip. But to be honest I can't really see the gray paste.
> > Anyway I reheated the board and got the AD9834 off and tried to hand
> > solder it. I have had great success on 2 ATS-3 kits. It just did not work.
> >
> > I have everything in 4 Zip-Lock bags. They have all the hardware and
> > the cd-rom, all the resistors for the front of the board, all the
> > capacitors left for top and maybe for some other place, and the main
> > board with the AD9834 mounted wrong, and the AC02 chip and one resistor
> > loose in the bag.
> >
> > I think anyone with a good iron and solder wick can fix the bottom
> > board in short order if they can see the components. I for sure can not.
> >
> > For $100.00 I will mail you the whole kit as is. I want the money
> > via paypal or a check mailed to Karl Larsen, K5DI, 3310 East Street, Las
> > Cruces, NM 88005. Of course I need your address as well :-)
> >
> >
> > --
> >
> > Karl F. Larsen, AKA K5DI
> > Linux User
> > #450462 http://counter.li.org.
> >
> >
> >
> >
> > Yahoo! Groups Links
> >
> >
> >
> >
> >
>

1659. Re: [AT_Sprint] For Sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-24 22:52:22 UTC
From: Karl Larsen
Topic: 1656 Message: 1659

n0tu/Steve wrote:
> I can MO tomorrow AM f you want?
>
That would be fine. I am not sure what you need from me for a money
order to work.

I need your name and address so I can mail the kit to you. You can
send that direct to me at the from address on this email.

Thanks, Karl

> On 9/24/07, n0tu/Steve <n0tu.qrp@...> wrote:
>
>> Karl, I'll take it!!! Steve/n0tu
>>
>> On 9/24/07, Karl Larsen <k5di@...> wrote:
>>
>>> I have now proven that my 72 year old eyes both with plastic fix
>>> focused lens will not make it. I tried to fix the solder job on the
>>> AD9834 chip. For some reason, likely that I had too much solder laden
>>> paste on that chip. But to be honest I can't really see the gray paste.
>>> Anyway I reheated the board and got the AD9834 off and tried to hand
>>> solder it. I have had great success on 2 ATS-3 kits. It just did not work.
>>>
>>> I have everything in 4 Zip-Lock bags. They have all the hardware and
>>> the cd-rom, all the resistors for the front of the board, all the
>>> capacitors left for top and maybe for some other place, and the main
>>> board with the AD9834 mounted wrong, and the AC02 chip and one resistor
>>> loose in the bag.
>>>
>>> I think anyone with a good iron and solder wick can fix the bottom
>>> board in short order if they can see the components. I for sure can not.
>>>
>>> For $100.00 I will mail you the whole kit as is. I want the money
>>> via paypal or a check mailed to Karl Larsen, K5DI, 3310 East Street, Las
>>> Cruces, NM 88005. Of course I need your address as well :-)
>>>
>>>
>>> --
>>>
>>> Karl F. Larsen, AKA K5DI
>>> Linux User
>>> #450462 http://counter.li.org.
>>>
>>>
>>>

>>>
>>> Yahoo! Groups Links
>>>
>>>
>>>
>>>
>>>
>
>
>
> Yahoo! Groups Links
>
>
>
>
>
>

--

Karl F. Larsen, AKA K5DI
Linux User
#450462 http://counter.li.org.

1660. QBSA enclosure ideas?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-25 00:28:53 UTC
From: shadle
Topic: 1660 Message: 1660

Hi all,
I'm almost ready to begin building my ATS-3B, but am trying to get a little more SMD experience before I attack it. I know this is the ATS group, but...the QBSA is something that I'm guessing a lot of folks on this list have also built.

I finished the SMD parts for the QBSA last night and then started thinking about what I wanted to do with it when I was done.

What have you guys used as enclosures for the QBSA? I would love to see photos if you have them available.

Thanks!
-john W4PAH

1661. Cash Olsen maiden voyage.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-25 03:38:37 UTC
From: kc7fys
Topic: 1661 Message: 1661

My first experience with the Cash Olsen method at the Back Side of the 3B board. No significant audio and no titles on this vid--
http://www.youtube.com/watch?v=HP4ptw9RvIE
73, KC7FYS

1662. Re: QBSA enclosure ideas?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-25 03:46:15 UTC
From: kc7fys
Topic: 1660 Message: 1662

Howdy John,
My QBSA enclosure... I guess I should build everything twice and throw the first iteration away. Anyway, here it is:
Without top http://farm2.static.flickr.com/1401/746305323_5b8ea5a89e_b.jpg
Dremelling the front panel
http://farm2.static.flickr.com/1396/746304195_3b44c3e5de_b.jpg

As you can see, my LED display is set too far back from the bodies of the two front PCB-mount pots. You have two pin configurations to choose from with the mounting of the front part of the chassis--and you can also set the freq readout 'deep' or by setting the pins just flush into the holes, which will allow a more attractive front panel. Mine looks too cobbled.
Anyway, my photos.
73, Jonathan

1663. 3B initial parts placement and soldering session

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-25 04:02:22 UTC
From: kc7fys
Topic: 1636 Message: 1663

I have to say, I'm sold on the Cash Olsen method--at least for some situations. I get a shiny, concave, and slightly matte solder joint. On the ICs, I'm super impressed. I never would be able to do this with my shaky iron--at least not with bigger solder blobs and more bridges. I do wonder if I'm not over-heating the parts, but I am conservative with the Hobby Lobby embossing tool and as soon as it flows I back off. I'm placing the other SMTs on the Front surface and getting ready to do that side. I'm worried that the parts will just fall off the other side, but there is probably not enough focussed heat and surface tension will probably hold things. I'm being as careful as I can; I just hope I'm not building a 1.1 oz paperweight!

One thing I learned, and I remember seeing diagrams on packages in Akihabara electronic parts shops: I would put a rope of solder paste _on_top_ of the IC pins next time, rather than right underneath. It seems like the flow and separate process would happen with fewer bridges.
http://www.flickr.com/photos/jonathancharles/sets/72157602077258104/
Jonathan KC7FYS

1664. RE: [AT_Sprint] 3B initial parts placement and soldering session

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-25 04:18:21 UTC
From: Ken Lotts
Topic: 1636 Message: 1664

Great photos.. Thanks for sharing them.
Flickr is awesome. Good luck with your ATS3B.

Ken Lotts
aa7jc

-----Original Message-----
From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com]On Behalf Of kc7fys
Sent: Monday, September 24, 2007 9:02 PM
To: AT_Sprint@yahoogroups.com
Subject: [AT_Sprint] 3B initial parts placement and soldering session

I have to say, I'm sold on the Cash Olsen method--at least for some situations. I get a shiny, concave, and slightly matte solder joint. On the ICs, I'm super impressed. I never would be able to do this with my shaky iron--at least not with bigger solder blobs and more bridges. I do wonder if I'm not over-heating the parts, but I am conservative with the Hobby Lobby embossing tool and as soon as it flows I back off. I'm placing the other SMTs on the Front surface and getting ready to do that side. I'm worried that the parts will just fall off the other side, but there is probably not enough focussed heat and surface tension will probably hold things. I'm being as careful as I can; I just hope I'm not building a 1.1 oz paperweight!

One thing I learned, and I remember seeing diagrams on packages in Akihabara electronic parts shops: I would put a rope of solder paste _on_top_ of the IC pins next time, rather than right underneath. It seems like the flow and separate process would happen with fewer bridges.
http://www.flickr.com/photos/jonathancharles/sets/72157602077258104/
Jonathan KC7FYS

1665. Re: [AT_Sprint] For Sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-25 16:22:39 UTC
From: Kurt Savegnago
Topic: 1656 Message: 1665

Can't anyone build it for you for cripes sake.?

Kurt
--- Karl Larsen <k5di@...> wrote:

> I have now proven that my 72 year old eyes both
> with plastic fix
> focused lens will not make it. I tried to fix the
> solder job on the
> AD9834 chip. For some reason, likely that I had too
> much solder laden
> paste on that chip. But to be honest I can't really
> see the gray paste.
> Anyway I reheated the board and got the AD9834 off
> and tried to hand
> solder it. I have had great success on 2 ATS-3 kits.
> It just did not work.
>
> I have everything in 4 Zip-Lock bags. They have
> all the hardware and
> the cd-rom, all the resistors for the front of the
> board, all the
> capacitors left for top and maybe for some other
> place, and the main
> board with the AD9834 mounted wrong, and the AC02
> chip and one resistor
> loose in the bag.
>
> I think anyone with a good iron and solder wick
> can fix the bottom
> board in short order if they can see the components.
> I for sure can not.
>
> For $100.00 I will mail you the whole kit as is.
> I want the money
> via paypal or a check mailed to Karl Larsen, K5DI,
> 3310 East Street, Las
> Cruces, NM 88005. Of course I need your address as
> well :-)
>
>
> --
>
> Karl F. Larsen, AKA K5DI
> Linux User

> #450462 http://counter.li.org.
>
>
>
>
> Yahoo! Groups Links
>
>
>
>
>

Slackware user since 1994

1666. Hot plate

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-25 16:28:47 UTC
From: Kurt Savegnago
Topic: 1666 Message: 1666

Hey,

Has anyone tried a hot plate with the Cash Olsen
method? I have one available and I figure I could put
a
piece of sheet metal over the element and use a
thermometer to measure the surface temperature.
I figure if I can get the temp right (is it about
380F
or more?) I could get this to work. I haven't had the
time to start building the 3B yet but have a
DDR(digital defined radio) kit I was going to
sacrifice first.

Kurt Savegnago

Slackware user since 1994

1667. Re: [AT_Sprint] Hot plate

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-25 16:36:37 UTC
From: Gil Stacy
Topic: 1666 Message: 1667
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

1668. What's an "good" build time for an ATS rig?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-25 16:37:00 UTC
From: Hank Greeb
Topic: 1656 Message: 1668

How long does it take for a person who is competent in the art of surface mount devices to put one of these together? I'm wavering on buying one to build, primarily because I've never built anything with surface mount. I have a couple "easier" kits to put together before I jump in. I hope to make a decision before the next round of kits is offered.

73 de n8xx Hg

Kurt Savegnago wrote:

Can't anyone build it for you for cripes sake.?

Kurt

1669. Re: [AT_Sprint] Hot plate

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-25 16:42:02 UTC
From: Michael Harnage
Topic: 1666 Message: 1669

I used an old pan on the kitchen stove. Just got it hot enough to boil drops of water. I build my boards with longer bolts in the mounting holes (so the board stays level). Just place the board on the pan (it stands off the pan because of the bolts) for a few minutes then start the heat gun tills the solder turns shiney. Did the bottom of the board first then populated the top and did it. Two session on with the pan/heat gun. Worked like a charm. Remove a couple of bridges and it worked like a charm. One of my 0603 resistors got messed up, but it too, was an easy fix.

If I want to mess with keeping track of temperatures then I use my convection oven that I got just for electronics. Both methods work fine.

-mike/w1mt

--- Kurt Savegnago <ksaves2@...> wrote:

> Hey,
>
> Has anyone tried a hot plate with the Cash Olsen
> method?

Yahoo! oneSearch: Finally, mobile search
that gives answers, not web links.
http://mobile.yahoo.com/mobileweb/onesearch?refer=1ONXIC

1670. Re: [AT_Sprint] What's an "good" build time for an ATS rig?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-25 16:48:18 UTC
From: Michael Harnage
Topic: 1656 Message: 1670

Don't know if I qualify to called good at it, but it takes me about 2 hours to populate and solder the main board. (Hot air method). With a soldering iron it takes me about 4 hours. (But I don't use that method anymore.) My first ATS was an ATS-2 and it took me about 7-8 hours. So you can get faster with time.

I think Steve could beat me hot air times with his solder methods cause he knows where the parts go just by looking at them. :) I gotta use my 10x loupe to read some of the markings.

-mike/w1mt

--- Hank Greeb <n8xx@...> wrote:

> How long does it take for a person who is competent
> in the art of
> surface mount devices to put one of these together?

_____
Take the Internet to Go: Yahoo!Go puts the Internet in your pocket: mail, news, photos & more.
http://mobile.yahoo.com/go?refer=1GNXIC

1671. Hot plate

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-25 16:55:16 UTC
From: Kurt Savegnago
Topic: 1666 Message: 1671

Hey,

Has anyone tried a hot plate with the Cash Olsen
method? I have one available and I figure I could put
a
piece of sheet metal over the element and use a
thermometer to measure the surface temperature.
I figure if I can get the temp right (is it about
380F
or more?) I could get this to work. I haven't had the
time to start building the 3B yet but have a
DDR(digital defined radio) kit I was going to
sacrifice first.

Kurt Savegnago

Slackware user since 1994

1672. Re: [AT_Sprint] Hot plate

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-25 16:59:06 UTC
From: Kurt Savegnago
Topic: 1666 Message: 1672

Thanks,

I like the idea of using screw standoffs to do
both sides. I have the heat embossing gun from
Hobby Lobby.

Kurt
--- Gil Stacy <gilstacy@...> wrote:

> Kurt,
> You are looking for 100 degrees C. with the
> secondary heat source. You are
> just heating the paste so that it begins to flow.
> Once it starts to change
> texture you fire up the embossing gun which is the
> main heat source.
> 73 Gil NN4CW
>

Slackware user since 1994

1673. Re: [AT_Sprint] What's an "good" build time for an ATS rig?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-25 17:11:34 UTC
From: Mark Brueggemann
Topic: 1656 Message: 1673

--- Hank Greeb <n8xx@...> wrote:

> How long does it take for a person who is competent
> in the art of surface mount devices to put one of
> these together?

I built my ATS3 at work over my lunch hour in one week,
including winding the toroids and building the band boards,
so somewhere between 5-6 hours. This is with a pencil
iron, not hot air or oven methods.

Mark K5LXP
Albuquerque, NM

1674. Re: [AT_Sprint] Hot plate

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-25 17:32:17 UTC
From: Karl Larsen
Topic: 1666 Message: 1674

Kurt Savegnago wrote:
> Hey,
>
> Has anyone tried a hot plate with the Cash Olsen
> method? I have one available and I figure I could put
> a
> piece of sheet metal over the element and use a
> thermometer to measure the surface temperature.
> I figure if I can get the temp right (is it about
> 380F
> or more?)
Kurt it is clear you have not even seen the Cash Olsen web page. The warmer should be about 200 degree F. The embosing tool has the higher temperature. It is applied later.

> I could get this to work. I haven't had the
> time to start building the 3B yet but have a
> DDR(digital defined radio) kit I was going to
> sacrifice first.
>
> Kurt Savegnago
>
> Slackware user since 1994
>
>
>
> Yahoo! Groups Links
>
>
>
>
>
>
>

--

Karl F. Larsen, AKA K5DI
Linux User
#450462 http://counter.li.org.

1675. Re: [AT_Sprint] What's an "good" build time for an ATS rig?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-25 18:35:29 UTC
From: Hank Greeb
Topic: 1656 Message: 1675

Thanks, good info I'm sure most anyone could beat me, since I'm a definite newbie!

Michael Harnage wrote:
>
> Don't know if I qualify to called good at it, but it
> takes me about 2 hours to populate and solder the main
> board. (Hot air method). With a soldering iron it
> takes me about 4 hours. (But I don't use that method
> anymore.) My first ATS was an ATS-2 and it took me
> about 7-8 hours. So you can get faster with time.
>
> I think Steve could beat me hot air times with his
> solder methods cause he knows where the parts go just
> by looking at them. :) I gotta use my 10x loupe to
> read some of the markings.
>
> -mike/w1mt
>
> --- Hank Greeb <n8xx@... <mailto:n8xx%40arrl.org>> wrote:
>
> > How long does it take for a person who is competent
> > in the art of
> > surface mount devices to put one of these together?
> <http://mobile.yahoo.com/go?refer=1GNXIC>
>

1676. Re: [AT_Sprint] What's an "good" build time for an ATS rig?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-25 18:36:48 UTC
From: Hank Greeb
Topic: 1656 Message: 1676

Tnx, the kind of info I seek!

Mark Brueggemann wrote:

--- Hank Greeb <n8xx@...> wrote:

> How long does it take for a person who is competent
> in the art of surface mount devices to put one of
> these together?

I built my ATS3 at work over my lunch hour in one week,
including winding the toroids and building the band boards,
so somewhere between 5-6 hours. This is with a pencil
iron, not hot air or oven methods.

Mark K5LXP
Albuquerque, NM

1677. Re: [AT_Sprint] What's an "good" build time for an ATS rig?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-25 21:08:47 UTC
From: john
Topic: 1656 Message: 1677

The slowest one wins!

John K5MO

1678. Any probs with a toaster oven?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-25 21:41:41 UTC
From: john
Topic: 1666 Message: 1678

I have a spare toaster oven to dedicate to my build...any reason not to use that?

John K5MO

1679. Re: [AT_Sprint] Any probs with a toaster oven?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-25 21:52:51 UTC
From: Gil Stacy
Topic: 1666 Message: 1679
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

1680. Re: [AT_Sprint] Any probs with a toaster oven?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-25 22:09:57 UTC
From: Mark Brueggemann
Topic: 1666 Message: 1680

--- john <johnmb@...> wrote:

> I have a spare toaster oven to dedicate to my build...
> any reason not to use that?

I used to use one to do solder reflow and wetting tests.
It did exhibit one side being slightly hotter than the
other, but not remarkably so. I would probably do some
trial boards first to characterize it but it should work.
Buy yourself a cheap thermocouple (many DMM's have this
feature built in) and attach it to your subject board
with kapton tape. You can readily watch it approach
reflow temperature and know when to expect the solder to
go molten.

Mark K5LXP
Albuquerque, NM

1681. Re: [AT_Sprint] Any probs with a toaster oven?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-25 23:18:09 UTC
From: Michael Harnage
Topic: 1666 Message: 1681

If it does not already have a fan (convection) then
you should add one but then it will cost even more.
The main problem with regular toaster oven is uneven
heat distribution. I like the tape idea and
thermocouple for monitoring. I would monitor the board
itself.

-mike/w1mt

--- john <johnmb@...> wrote:

> I have a spare toaster oven to dedicate to my
> build...any reason not to use
> that?
>
> John K5MO
>
>

_____
Check out the hottest 2008 models today at Yahoo! Autos.
http://autos.yahoo.com/new_cars.html

1682. Re: QBSA enclosure ideas?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-26 21:39:13 UTC
From: radio_kx0r
Topic: 1660 Message: 1682

--- In AT_Sprint@yahoogroups.com, "shadle" <shadle@...> wrote:
>
> Hi all,
> I'm almost ready to begin building my ATS-3B, but am trying to get a
> little more SMD experience before I attack it. I know this is the ATS
> group, but...the QBSA is something that I'm guessing a lot of folks on
> this list have also built.
>
> I finished the SMD parts for the QBSA last night and then started
> thinking about what I wanted to do with it when I was done.
>
> What have you guys used as enclosures for the QBSA? I would love to
> see photos if you have them available.
>
> Thanks!
> -john W4PAH
>

John,

Hope you're still following this. Please look at my pictures on this site (Photos) under KX0R, and you'll find three shots of my QBSA in a BLT case.

The QBSA was designed to fit in the BLT case, and it does fit - more or less exactly. The BLT is a QRP tuner unit sold by Doug Hendricks http://www.qrpkits.com/index.html . For a while he was selling the BLT enclosures separately, and I bought several when they were available. I ended up building several different homebrew versions of the BLT, and I still had one case left when I got my QBSA.

Maybe if you contact Doug Hendricks he would consider selling you a BLT case. I would buy more of them if he sold them again.

The hardest thing is getting the hole for the display in the right place. I'd suggest starting smaller than what you need and enlarging the hole with a flat file. I drilled a lot of holes to get a rough hole, and then filed out the opening while checking its position against the display. If you're good with files, you can get a pretty good rectangular hole just where you need it. Be careful and go easy, because with aluminum you can easily go too far.

As you see in my photos, I used a bunch of individual connectors for all the lines in and out. Some others here have suggested using fewer larger connectors - it's your call. There are advantages to both plans.

Mounting the QBSA and preparing the connectors and cables takes much longer than building the board.

The result is well worth the hassle, since it enhances the operation of the radio and provides several "big rig" features. Anyone who has the ATS rig (or other QRP rig) should consider getting a QBSA. This is a nice kit and well worth the price!

72/73

George Carey Fuller
KX0R

1683. Re: [AT_Sprint] FS: ATS-3 SOLD

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-26 21:46:58 UTC
From: Jim Miller
Topic: 1683 Message: 1683

----- Original Message -----
From: "mdgolfbum" <jim@...>
To: <AT_Sprint@yahoogroups.com>
Sent: Monday, September 24, 2007 3:10 PM
Subject: [AT_Sprint] FS: ATS-3

ATS-3: built in Altoids tin. No HW mods. Firmware is W1MT from 2006
Atlanticon. Can update to latest if desired.

1684. Re: QBSA enclosure ideas?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-26 22:09:17 UTC
From: Bruce Beford
Topic: 1660 Message: 1684

You will also find pictures of a packaged QBSA in the N1RX folder on the Photos page of the yahoo Group.

-Bruce n1RX

1685. Winding LF3 for the 80 meter module (secondary link winding)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-27 04:10:22 UTC
From: kc7fys
Topic: 1685 Message: 1685

Howdy.
I'm winding up that 66-turn toroid, but the 7-turns that reside between the ends of the main winding--do I continue winding that wire in the same direction? That would put the leads on each end on opposite sides (top and bottom faces) of the toroid. Is this how it should look when it's done, or do I have the leads on the right on TOP of the toroid, and the leads on the left on UNDER the toroid?
Newbie question, I know.
KC7FYS
ATS3B Photos at
http://www.flickr.com/photos/jonathancharles/sets/72157602077258104/

1686. Re: Winding LF3 for the 80 meter module (secondary link winding)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-27 04:24:25 UTC
From: kc7fys
Topic: 1685 Message: 1686

--- In AT_Sprint@yahoogroups.com, "kc7fys" <kc7fys@...> wrote:
>
> Howdy.
> I'm winding up that 66-turn toroid, but the 7-turns ......

I mean SIX turns. Sorry.
Jonathan

1687. Which order to solder parts?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-27 20:51:33 UTC
From: james.rushforth@tesco.net
Topic: 1687 Message: 1687

Hi
The ATS3B arrived today and having looked at the parts I am wondering which order to solder in the components on the main board.
I am doing it by hand. Do I start with the chips, giving me plenty of room to work with desoldering braid, or do I leave the static sensitive chips to last?
Any advice from those who have done the construction would be most helpful.
U7 pin spacing looks tight!

Thanks

Jim G3ZPD

1688. Re: [AT_Sprint] Winding LF3 for the 80 meter module (secondary link winding)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-27 21:01:14 UTC
From: Steven Weber
Topic: 1685 Message: 1688

>I'm winding up that 66-turn toroid, but the 7-turns that reside
>between the ends of the main winding--do I continue winding that wire
>in the same direction? That would put the leads on each end on

Doesn't really matter, as this is just a receiver coil, not an oscillator.
anyway you want to do it, so long as you can tell which winding is which,
because that does matter which set of holes they go in.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

1689. Re: Which order to solder parts?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-27 22:24:44 UTC
From: Jim Fraser
Topic: 1687 Message: 1689

I will be starting mine shortly as well and I was wondering the same thing. Like you I was leaning towards installing the ICs first for the same reason you mentioned. Any tips from the experienced ATS hand-solder folks out there?

I just soldered up a touch keyer board which used surface mount parts. I had a heck of time trying to remove a solder bridge on one of the samll ICs using a desoldering braid. I finally tried my plastic solder sucker tool and it worked great.

Jim K6JF

--- In AT_Sprint@yahoogroups.com, <james.rushforth@...> wrote:
>
> Hi
> The ATS3B arrived today and having looked at the parts I am wondering which order to solder in the components on the main board.
> I am doing it by hand. Do I start with the chips, giving me plenty of room to work with desoldering braid, or do I leave the static sensitive chips to last?
> Any advice from those who have done the construction would be most helpful.
> U7 pin spacing looks tight!
>
> Thanks
>
> Jim G3ZPD
>

1690. Re: Winding LF3 for the 80 meter module (secondary link winding)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-27 22:34:43 UTC
From: kc7fys
Topic: 1685 Message: 1690

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
>
> >I'm winding up that 66-turn toroid....
> Doesn't really matter, ...
> 72,
> Steve, KD1JV

Thanks very much.
KC7FYS

1691. Re: [AT_Sprint] Which order to solder parts?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-27 23:42:01 UTC
From: Gil Stacy
Topic: 1687 Message: 1691
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

1692. Re: Which order to solder parts?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-27 23:55:02 UTC
From: Jim Fraser
Topic: 1687 Message: 1692

Gil,

Well, the 3B manual has the installation order as resistors,
capacitors, semiconductors, through-hole. Perhaps the order is
irrelevant.

Jim K6JF

--- In AT_Sprint@yahoogroups.com, "Gil Stacy" <gilstacy@...> wrote:
>
> Jim,
> I have built the ATS both ways--IC's last and IC's first--using a
soldering
> iron. I didn't realize I was doing it the "wrong" way when I left
the IC's
> until last. The manual lays out the order of installation and IC's
are
> first. I didn't notice any problems doing IC's last. It's
tight, but
> very manageable, anyway you do it.
> 73 Gil NN4CW
>

1693. winding for balun core of QBSA

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-28 00:42:54 UTC
From: shadle
Topic: 1693 Message: 1693

Hi all,
I was wondering if you could check the photo in the album "W4PAH"
(it's the only photo in there). I just want to make sure I have the
balun core wound correctly before I solder it down.

Thanks!
-john W4PAH

1694. Superglue wrecked my paint job!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-28 01:46:50 UTC
From: kc7fys
Topic: 1694 Message: 1694

Well, I used a gel-type Cyanoacrylate 'superglue' to tack the ends of windings to my toroids, and to hold them down to the band module board (80M). It melted the paint, and might have interacted weirdly with the enamel on the windings themselves. Just not a desirable effect, IMHO. I've seen snotty-looking hot glue used in this way, and I even envisioned a sort of plastic nuts-n-bolts dealy-bob on there, which would involve drilling and may be a bit of overkill. Either way, superglue won't be used on the rest of the toroids. I considered nothing at all, but that #32 wire just wouldn't hold up to much jarring, and the toroid'd be flappin' in the breeze before long.
http://www.flickr.com/photos/jonathancharles/sets/72157602077258104/
Jonathan

1695. Re: [AT_Sprint] Superglue wrecked my paint job!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-28 02:00:57 UTC
From: Michael Harnage
Topic: 1694 Message: 1695

How bout a bit of double sided tape or foam.

-mike/w1mt

--- kc7fys <kc7fys@...> wrote:

> Well, I used a gel-type Cyanoacrylate 'superglue' to
> tack the ends of
> windings to my toroids,...It melted the paint,

_____
Take the Internet to Go: Yahoo!Go puts the Internet in your pocket: mail, news, photos & more.
http://mobile.yahoo.com/go?refer=1GNXIC

1696. Re: Superglue wrecked my paint job!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-28 02:59:48 UTC
From: radio_kx0r
Topic: 1694 Message: 1696

--- In AT_Sprint@yahoogroups.com, "kc7fys" <kc7fys@...> wrote:
>
> Well, I used a gel-type Cyanoacrylate 'superglue' to tack the ends of
> windings to my toroids, and to hold them down to the band module board
> (80M). It melted the paint, and might have interacted weirdly with the
> enamel on the windings themselves. Just not a desirable effect, IMHO.
> I've seen snotty-looking hot glue used in this way, and I even
> envisioned a sort of plastic nuts-n-bolts dealy-bob on there, which
> would involve drilling and may be a bit of overkill. Either way,
> superglue won't be used on the rest of the toroids. I considered
> nothing at all, but that #32 wire just wouldn't hold up to much
> jarring, and the toroid'd be flappin' in the breeze before long.
> http://www.flickr.com/photos/jonathancharles/sets/72157602077258104/
> Jonathan
>

Jonathan,

On my ATS-3A I used a few small dabs of 5-minute epoxy to secure the toroids. You're right - they need something to hold them. It really matters if you change bands often or use the rig in the field.

Another glue that's pretty safe for toroids is Duco Cement. It's similar to Q dope and airplane glue, and it dries fast. I think it's polystyrene, which is a good dielectric.

Silicone is useful for big toroids. It absorbs shocks, so it works better with large inductors. A plastic screw and washer provide a secure mounting also. It might work for the ATS modules, but it's tedious and doesn't flow well.

Use a minimum amount of glue. Too much might slightly reduce the Q of the inductors. On 20 meters my coils already get warm. A little dab will do yah - don't coat the windings - just a dab smaller than the head of a paper match, just between the toroid and the board, and no more than 2 dabs per toroid.

Looks like your gel superglue dissolves the paint on the toroids - hopefully that's not the insulation of the magnet wire as well.

Thanks for the excellent photos and keep those tips coming! I'm going to keep reading these posts for a while before I begin my ATS-3B.

72/73
Carey/George
KX0R

1697. Hot Plate Tool

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-28 03:51:05 UTC
From: radio_kx0r
Topic: 1697 Message: 1697

I think I may have found a low-cost way to create a low-tech hot-plate for the Cash Olson soldering method. When I was at Hobby Lobby buying my cute pink embossing gun (hot air tool), I found some nice little candle warmers. These miniature hot plates are rated at 15W at 120V. They cost all of $4 and even have a neon pilot light and a switch!

The candle warmer is intended to heat scented wax candles in glass containers so they can release their scent without actually burning. It is very similar to the cup warmers used by others, but the 15W is a little warmer than some of the cup warmers.

However, there is a problem. The candle warmer's hot surface is 3.6 inches in diameter, and it's recessed down about .12 inches, so the ATS-3B board won't quite fit or lie flat. It's also made of thin metal, and I don't believe it would provide even heat. Here's what I did to improve this tool:

I found a piece of .127" aluminum in my junk box and cut it into an octagon that will fit in the recessed "well" of the candle warmer. I chose a good flat piece and deburred it carefully. We want it to lie flat on the heater. Its top surface lies just a few thousandths above the plastic ring around the candle warmer - this is important.

I still needed a larger surface for the ATS-3B board. I found a piece of aluminum plate about .25" thick; it measures about 3.25" X 4.25". This is a little larger than we need for the board, but I figured it would be OK as long as it wasn't any larger.

The .127" thick aluminum octagon transfers the heat from the candle warmer surface to the thicker .25" aluminum plate, which sits on top and is a very efficient heat spreader.

I connected the candle warmer to a variac, set the aluminum spreaders in place, and let them warm up for 15 minutes. With 100 volts on the heater, drops of water bubble on the plate but don't boil. With 110-120 volts, the drops boil immediately, and best of all, the boiling is very uniform across the thick plate, even at the exposed corners.

With 130 volts, the water drops dance and spatter as they boil.

We may be able to run the voltage up even higher, if we really need a higher temperature - however, I think that the unit set up the way I have it may work fine. It does take a long time to reach thermal equilibrium, because of the thick aluminum, but there is no hot spot. Don't use a top plate much larger than the ATS board, or the temperature may not be high enough.

No - I haven't actually used it to solder with yet. I'm going to practice with it before attempting the kit. I move slowly, and I really want a good radio.

I just wanted you share these concepts in case some of you are looking for a pre-heater to combine with the hot air tool. It may be for sale at the same store - just smell around for those scented candles!

I'll post some photos soon.

I did feel pretty silly at the cash register with my pink embossing tool and my little candle warmer...the lady clerk was very kind...

The things we do for QRP...

72/73

George Carey Fuller
KX0R

1698. SRI OT: AMQRP Homebrewer Magazine on CDR?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-28 07:39:58 UTC
From: kc7fys
Topic: 1698 Message: 1698

Sorry for off-topic. Any of you have the AMQrp Homebrewer magazine(s)
in print or digital format? -Jonathan

1699. Re: Hot Plate Tool

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-28 07:50:08 UTC
From: kc7fys
Topic: 1697 Message: 1699

--- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@...> wrote:
> I did feel pretty silly at the cash register with my pink embossing
> tool and my little candle warmer...the lady clerk was very kind...
> The things we do for QRP...
> George Carey Fuller KX0R

Funny, my embossing tool was covered with snakeskin with wrought iron accents and spikes. Brand name: Captain Stag. My candle warmer--"The Boar Warrior." A chassis of cold-rolled extruded molybdenum steel, unpolished. The clerk lady--well, she gave me a knowing glance, a fingertip lingered at her throat, "Oh... goodness."
The things we do for QRP...
Jonathan KC7FYS

1700. Re: [AT_Sprint] Re: Which order to solder parts?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-28 09:27:38 UTC
From: Gil Stacy
Topic: 1687 Message: 1700
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

1701. Re: SRI OT: AMQRP Homebrewer Magazine on CDR?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-28 10:41:58 UTC
From: Bruce Beford
Topic: 1698 Message: 1701

Yes, I do. -Bruce N1RX

--- In AT_Sprint@yahoogroups.com, "kc7fys" <kc7fys@...> wrote:
>
> Sorry for off-topic. Any of you have the AMQrp Homebrewer magazine(s)
> in print or digital format? -Jonathan
>

1702. Re: winding for balun core of QBSA

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-28 10:43:10 UTC
From: Bruce Beford
Topic: 1693 Message: 1702

Your QBSA binocular core wind1ng is correct, John.
-Bruce N1RX

--- In AT_Sprint@yahoogroups.com, "shadle" <shadle@...> wrote:
>
> Hi all,
> I was wondering if you could check the photo in the album "W4PAH"
> (it's the only photo in there). I just want to make sure I have the
> balun core wound correctly before I solder it down.
>
> Thanks!
> -john W4PAH
>

1703. Re: [AT_Sprint] Superglue wrecked my paint job!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-28 10:40:56 UTC
From: john
Topic: 1694 Message: 1703

Wouldnt the superglue replace any insulation it affected?

At 10:00 PM 9/27/2007, Michael Harnage wrote:
>How bout a bit of double sided tape or foam.
>
>-mike/w1mt
>
>--- kc7fys <kc7fys@...> wrote:
>
> > Well, I used a gel-type Cyanoacrylate 'superglue' to
> > tack the ends of
> > windings to my toroids,...It melted the paint,
>
>
>
>
>_____
>Take the Internet to Go: Yahoo!Go puts the Internet in your pocket: mail,
>news, photos & more.
>http://mobile.yahoo.com/go?refer=1GNXIC
>
>
>
>Yahoo! Groups Links
>
>
>

1704. Re: [AT_Sprint] SRI OT: AMQRP Homebrewer Magazine on CDR?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-28 13:32:48 UTC
From: Mark Brueggemann
Topic: 1698 Message: 1704

--- kc7fys <kc7fys@...> wrote:

> Sorry for off-topic. Any of you have the AMQrp Homebrewer magazine(s)
> in print or digital format?

You can buy the entire series from their website:

PAST ISSUES & BONUS MATERIAL
We included issues 1-5 together to all subscribers as part of issue #5, and separately available previous issues for a given year in an annual collection (on a separately-purchased CD for issue #5, #10, #15, etc.), detailed sections on current Kits and past kits (aka "projects"), including all manuals, schematics, software, pcb layouts, etc. It's a great reference bank of technical homebrewing information. The last two issues, #6 and #7, are also separately still available.

1705. Re: [AT_Sprint] SRI OT: AMQRP Homebrewer Magazine on CDR?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-28 13:32:52 UTC
From: Mark Brueggemann
Topic: 1698 Message: 1705

--- kc7fys <kc7fys@...> wrote:

> Sorry for off-topic. Any of you have the AMQrp Homebrewer magazine(s)
> in print or digital format?

You can buy the entire series from their website:

PAST ISSUES & BONUS MATERIAL
We included issues 1-5 together to all subscribers as part of issue #5, and separately available previous issues for a given year in an annual collection (on a separately-purchased CD for issue #5, #10, #15, etc.), detailed sections on current Kits and past kits (aka "projects"), including all manuals, schematics, software, pcb layouts, etc. It's a great reference bank of technical homebrewing information. The last two issues, #6 and #7, are also separately still available.

1706. Re: [AT_Sprint] SRI OT: AMQRP Homebrewer Magazine on CDR?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-28 13:38:18 UTC
From: k4bev@aol.com
Topic: 1698 Message: 1706

In a message dated 9/28/2007 8:33:12 AM Central Daylight Time,
qrq_cw@... writes:

You can buy the entire series from their website:

From their website:

"Sorry, all CD-ROMs are out of print and are not available at this time."

Another great one fades into the past :-(

73 de k4bev

********** See what's new at http://www.aol.com

1707. Re: [AT_Sprint] SRI OT: AMQRP Homebrewer Magazine on CDR?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-28 15:25:30 UTC
From: Hank Greeb
Topic: 1698 Message: 1707

If the series is unavailable in print, and no longer provided on CD ROM from the AmQRP club, would someone inquire whether it would violate copyright to copy an existing CD and make it available again? I haven't seen the series myself, but if there's a demand I'd be willing to make copies from a legit copy and give the CD's back to AMQRP club at my cost, or sell them individually for a very reasonable price. I'd be doing this as a service to the QRPers. There might be others, who are "really" in business, who might like to do it as a part of their business.

72/73 de n8xx Hg

k4bev@... wrote:
>
> In a message dated 9/28/2007 8:33:12 AM Central Daylight Time,
> qrq_cw@... writes:
>
> You can buy the entire series from their website:
>
>
> From their website:
>
> "Sorry, all CD-ROMs are out of print and are not available at this time."
>
> Another great one fades into the past :-(
>
> 73 de k4bev

1708. Re: SRI OT: AMQRP Homebrewer Magazine on CDR?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-28 15:52:07 UTC
From: John L. Sielke
Topic: 1698 Message: 1708

--- In AT_Sprint@yahoogroups.com, Hank Greeb <n8xx@...> wrote:
>
> If the series is unavailable in print, and no longer provided on CD ROM
> from the AmQRP club, would someone inquire whether it would violate
> copyright to copy an existing CD and make it available again? I
haven't
> seen the series myself, but if there's a demand I'd be willing to make
> copies from a legit copy and give the CD's back to AMQRP club at my
> cost, or sell them individually for a very reasonable price. I'd be
> doing this as a service to the QRPers. There might be others, who are
> "really" in business, who might like to do it as a part of their
business.
>
> 72/73 de n8xx Hg
>

I would suggest you contact George Heron, N2APB (n2apb@...)
about permission to do this.

John W2AGN

1709. Fuchs Antenna Tuner experience??

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-28 16:02:50 UTC
From: John A. Evans - N0HJ
Topic: 1698 Message: 1709

Greetings,

Has anyone used the Fuchs antenna tuner design? If so, I am interested in what others have experienced using this tuner, whether it be from the German kit version or a homebuilt variety.

tnx es 72 - john - n0hj

1710. Re: [AT_Sprint] Re: SRI OT: AMQRP Homebrewer Magazine on CDR?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-28 16:05:02 UTC
From: Kurt Savegnago
Topic: 1698 Message: 1710

You would be violating copyright but if someone
sent it to you offline, who is going to know?
If you contact the copyright owner they might be
able to help you.

Kurt
KC9LDH
--- "John L. Sielke" <w2agn@...> wrote:

> --- In AT_Sprint@yahoogroups.com, Hank Greeb
> <n8xx@...> wrote:
> >
> > If the series is unavailable in print, and no
> longer provided on CD ROM
> > from the AmQRP club, would someone inquire whether
> it would violate
> > copyright to copy an existing CD and make it
> available again? I
> haven't
> > seen the series myself, but if there's a demand
> I'd be willing to make
> > copies from a legit copy and give the CD's back to
> AMQRP club at my
> > cost, or sell them individually for a very
> reasonable price. I'd be
> > doing this as a service to the QRPers. There
> might be others, who are
> > "really" in business, who might like to do it as a
> part of their
> business.
> >
> > 72/73 de n8xx Hg
> >
>
> I would suggest you contact George Heron, N2APB
> (n2apb@...)
> about permission to do this.
>
>
> John W2AGN
>
>
>
>
> Yahoo! Groups Links

>
>
>
>
>

Slackware user since 1994

1711. Re: [AT_Sprint] Re: SRI OT: AMQRP Homebrewer Magazine on CDR?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-28 17:15:38 UTC
From: Hank Greeb
Topic: 1698 Message: 1711

Yep, you're right. I don't want to explicitly nor inadvertently violate copyright. That's why I'd seek AMQRP's authorization before doing anything like this.

72/73 de n8xx Hg

Kurt Savegnago wrote:
>
> You would be violating copyright but if someone sent it to you
> offline, who is going to know? If you contact the copyright owner they
> might be able to help you.
>
> Kurt
> KC9LDH
> --- "John L. Sielke" <w2agn@... <mailto:w2agn%40w2agn.net>> wrote:
>
> > --- In AT_Sprint@yahoogroups.com
> <mailto:AT_Sprint%40yahoogroups.com>, Hank Greeb
> > <n8xx@...> wrote:
> > >
> > > If the series is unavailable in print, and no
> > longer provided on CD ROM
> > > from the AmQRP club, would someone inquire whether
> > it would violate
> > > copyright to copy an existing CD and make it
> > available again? I
> > haven't
> > > seen the series myself, but if there's a demand
> > I'd be willing to make
> > > copies from a legit copy and give the CD's back to
> > AMQRP club at my
> > > cost, or sell them individually for a very
> > reasonable price. I'd be
> > > doing this as a service to the QRPers. There
> > might be others, who are
> > > "really" in business, who might like to do it as a
> > part of their
> > business.
> > >
> > > 72/73 de n8xx Hg
> > >
> >
> > I would suggest you contact George Heron, N2APB
> > (n2apb@... <mailto:n2apb%40amqrp.org>)
> > about permission to do this.

> >
> >
> > John W2AGN
> >
>

1712. Re: [AT_Sprint] Superglue wrecked my paint job!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-28 17:19:50 UTC
From: Kurt Savegnago
Topic: 1694 Message: 1712

I wouldn't trust it. Sometimes the cure could
generate
a large amount of heat.

Now one might try the kind of Cyanoacrylate that is
deemed safe for use on foam. A lot of indoor R/C
modelers build models out of foam board. If their
superglues generated heat, they would be worthless.
I think to only 100% safe glue would be a water based
glue or not use any glue at all. Hot glues I would
still worry about the insulation melting though one
might get away with it.
Kurt
KC9LDH
--- john <johnmb@...> wrote:

> Wouldnt the superglue replace any insulation it
> affected?
>
>
> At 10:00 PM 9/27/2007, Michael Harnage wrote:
> >How bout a bit of double sided tape or foam.
> >
> >-mike/w1mt
> >
> >--- kc7fys <kc7fys@...> wrote:
> >
> > > Well, I used a gel-type Cyanoacrylate
> 'superglue' to
> > > tack the ends of
> > > windings to my toroids,...It melted the paint,
> >
> >
> >
> >
>
>_____
> >Take the Internet to Go: Yahoo!Go puts the Internet
> in your pocket: mail,
> >news, photos & more.
> >http://mobile.yahoo.com/go?refer=1GNXIC
> >
> >
> >
> >Yahoo! Groups Links

> >
> >
> >
>
>
>
>
> Yahoo! Groups Links
>
>
>
>
>

Slackware user since 1994

1713. Re: [AT_Sprint] Re: SRI OT: AMQRP Homebrewer Magazine on CDR?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-28 16:18:50 UTC
From: W2AGN
Topic: 1698 Message: 1713

Kurt Savegnago wrote:
> You would be violating copyright but if someone
> sent it to you offline, who is going to know?
> If you contact the copyright owner they might be
> able to help you.
>
> Kurt
> KC9LDH

You know, I just got in trouble on another list when a member requested, on list, that the contents and value of a package sent to them be misrepresented to avoid customs charges. I expressed dismay not only at the attempt at dishonesty, but the fact it was done on a public forum as well. I received copious hate mail for my criticism of this.

Now I see "who is going to know?" about a proposed copyright violation.

Has Ham Radio really deteriorated this much?

_ _ _ _ _
/ \ / \ / \ / \ / \ John L. Sielke
(W)(2)(A)(G)(N) http://w2agn.net
_/ _/ _/ _/ _/ http://www.blurty.com/users/w2agn
check out: http://groups.yahoo.com/group/QRPariahs/

1714. Yea! Mine arrived today

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-28 17:32:01 UTC
From: Randal
Topic: 1714 Message: 1714

Fell asleep at the switch and missed the first run. Saw that Steve was starting a second run and ran to the post office.

To my delight the packet arrived today. Unfortunately I won't have time for the next week and a half to build it (leaving on a trip). When I get back I'll build my ATS3B then unpack my luggage.

Thanks Steve

73 All

Ran - W1IN

1715. Re: Which order to solder parts?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-28 17:57:40 UTC
From: Jim Fraser
Topic: 1687 Message: 1715

Well, I started building last night. I placed the identifying resistors on the band modules. And on the main board I installed the MPU (U6) and the DDS (U7). The DDS has three solder bridges I need to fix as it was getting late and I decided to stop. The DDS chip was not really too bad if careful, there were just a couple times where I though...just a little bit more solder...then the bridge appears!

After most of the ICs are in I will go back and follow the sequence in the manual. Concurrently I will also try to complete one band module every other evening. It will take some time to complete as I take my time carefully lining up parts so that it looks neat. I am in no big rush, besides the bands are pretty lousy anyway.

Jim K6JF

1716. Re: [AT_Sprint] Superglue wrecked my paint job!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-28 18:26:47 UTC
From: Kurt Savegnago
Topic: 1694 Message: 1716

--- kc7fys <kc7fys@...> wrote:

> Well, I used a gel-type Cyanoacrylate 'superglue' to
> tack the ends of
> windings to my toroids, and to hold them down to the
> band module board
> (80M). It melted the paint, and might have
> interacted weirdly with the
> enamel on the windings themselves. Just not a
> desirable effect, IMHO.
> I've seen snotty-looking hot glue used in this way,
> and I even
> envisioned a sort of plastic nuts-n-bolts dealy-bob
> on there, which
> would involve drilling and may be a bit of overkill.
> Either way,
> superglue won't be used on the rest of the toroids.
> I considered
> nothing at all, but that #32 wire just wouldn't hold
> up to much
> jarring, and the toroid'd be flappin' in the breeze
> before long.
>
http://www.flickr.com/photos/jonathancharles/sets/72157602077258104/
> Jonathan

If you absolutely want to tack the ends down, I
believe a two part epoxy would be safe. Takes time or
use the
5 minute stuff. No heat.

Kurt
KC9LDH

Slackware user since 1994

1717. Re: [AT_Sprint] Re: SRI OT: AMQRP Homebrewer Magazine on CDR?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-28 18:21:36 UTC
From: Kurt Savegnago
Topic: 1698 Message: 1717

--- W2AGN <w2agn@...> wrote:

> Kurt Savegnago wrote:
> > You would be violating copyright but if someone
> > sent it to you offline, who is going to know?
> > If you contact the copyright owner they might be
> > able to help you.
> >
> > Kurt
> > KC9LDH
>
> You know, I just got in trouble on another list when
> a member requested, on
> list, that the contents and value of a package sent
> to them be misrepresented to
> avoid customs charges. I expressed dismay not only
> at the attempt at dishonesty,
> but the fact it was done on a public forum as well.
> I received copious hate mail
> for my criticism of this.
>
> Now I see "who is going to know?" about a proposed
> copyright violation.
>
> Has Ham Radio really deteriorated this much?
>
>
> ---
> _ _ _ _ _
> / \ / \ / \ / \ / \ John L. Sielke
> (W)(2)(A)(G)(N) http://w2agn.net
> _/ _/ _/ _/ _/
> http://www.blurty.com/users/w2agn
> check out: http://groups.yahoo.com/group/QRPariahs/

Come on,

If one can find the copyright owner and they can
help
them, then fine. By all means, do it legally. If the
guy just really has to have the disk and he can't find

a source, then what's the big stink? This is just a
lousy CD. I suspect if the fellow can find the
copyright holder, I bet he might sell it to him no or
perhaps the person might be so honored, he might get

it for free or reduced cost.

Sending new stuff overseas is another issue.
Sending
used equipment is subject to depreciation as far as
tariffs are concerned.

Kurt
KC9LDH

Slackware user since 1994

1718. Is there a free spectrum analyzer app that you use?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-29 09:37:30 UTC
From: kc7fys
Topic: 1718 Message: 1718

I have used the spectrum display feature of CWGet, but is there another I could grab? What application do you use?

1719. Re: Is there a free spectrum analyzer app that you use?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-29 10:00:26 UTC
From: Bruce Beford
Topic: 1718 Message: 1719

--- In AT_Sprint@yahoogroups.com, "kc7fys" <kc7fys@...> wrote:
>
> I have used the spectrum display feature of CWGet, but is there
> another I could grab? What application do you use?
>

Spectrogram is one. You can find the last freeware version on the site of Tom Hammond, N0SS. (Just Google his callsign) Many builders use that program to align the filters in the Elecraft K2.

Another option is the free PSK program Digipan.

There's a lot of free audio programs out there.

GL,
Bruce N1RX

1720. Re: SRI OT: AMQRP Homebrewer Magazine on CDR?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-29 10:34:33 UTC
From: kc7fys
Topic: 1698 Message: 1720

--- In AT_Sprint@yahoogroups.com, k4bev@... wrote:
> In a message dated 9/28/2007 8:33:12 AM Central Daylight Time,
> qrq_cw@... writes:
> You can buy the entire series from their website:
> From their website:
>
> "Sorry, all CD-ROMs are out of print and are not available at this
time."

Yes. That's why I asked.
Jonathan

1721. Re: Is there a free spectrum analyzer app that you use?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-29 10:56:58 UTC
From: kc7fys
Topic: 1718 Message: 1721

--- In AT_Sprint@yahoogroups.com, "Bruce Beford" <bruce.beford@...> wrote:
> There's a lot of free audio programs out there.
> GL,
> Bruce N1RX

Thanks, Bruce.
Jonathan

1722. Re: [AT_Sprint] Re: Is there a free spectrum analyzer app that you use?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-29 11:37:32 UTC
From: john
Topic: 1718 Message: 1722

Spectrogram is pretty easy to get going... get the version from Tom's
website as shown.

John K5MO

At 06:00 AM 9/29/2007, Bruce Beford wrote:
>--- In AT_Sprint@yahoogroups.com, "kc7fys" <kc7fys@...> wrote:
> >
> > I have used the spectrum display feature of CWGet, but is there
> > another I could grab? What application do you use?
> >
>
>Spectrogram is one. You can find the last freeware version on the site
>of Tom Hammond, N0SS. (Just Google his callsign) Many builders use that
>program to align the filters in the Elecraft K2.
>
>Another option is the free PSK program Digipan.
>
>There's a lot of free audio programs out there.
>
>GL,
>Bruce N1RX
>
>
>
>
>Yahoo! Groups Links
>
>
>

1723. +3.5 and +5 regulator outputs

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-29 13:55:31 UTC
From: kc7fys
Topic: 1723 Message: 1723

Where are these points on the populated PCB? P.22 in the manual.pdf
mentions these in the initial pre-powerup check-out.
Thanks,
Jonathan
PS. There are 100 ATS3Bs out there, presumably being built. I must be
the only one who wonders some of this stuff, but I'm going to forget
about exposing my ignorance. I'm learning as I go!

1724. Re: [AT_Sprint] +3.5 and +5 regulator outputs

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-29 16:56:41 UTC
From: Steven Weber
Topic: 1723 Message: 1724

>Where are these points on the populated PCB? P.22 in the manual.pdf
>mentions these in the initial pre-powerup check-out.

A good place to check the 3.5V is at the reference oscillator. 5 volts shows up in a lot of places, like pin 8 of U1, U2, ect. Or at the filter cap near the regulator. You just don't want to do it at the regulator, as if the probe slips and you short the input to the output, it will do some damage!

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

1725. Re: +3.5 and +5 regulator outputs

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-29 18:00:38 UTC
From: Garry
Topic: 1723 Message: 1725

Nah Johnathan. I doubt you are the only one to wonder about this stuff. My ATS-3b has arrived but I am waiting for the solder paste from Cash Olsen before attempting to do anything with it. I took a close look at the parts and I have to admit that I approach this build with great trepidation. I only hope my knowledge of radio basics is going to be sufficient to get me through the trouble shooting as I fully expect that there will be issues for me to deal with, not the least of which will be my inability to see adequately to do the assembly.

Just keep asking the questions. I have no doubt that they and the answers will be of great use to me.

Garry/Ve7ajj

--- In AT_Sprint@yahoogroups.com, "kc7fys" <kc7fys@...> wrote:
>
> Where are these points on the populated PCB? P.22 in the manual.pdf
> mentions these in the initial pre-powerup check-out.
> Thanks,
> Jonathan
> PS. There are 100 ATS3Bs out there, presumably being built. I must be
> the only one who wonders some of this stuff, but I'm going to forget
> about exposing my ignorance. I'm learning as I go!
>

1726. Another Learning Curve to overcome. (ALC)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-29 20:00:32 UTC
From: Bill Harris
Topic: 1726 Message: 1726

Garry:
Think of what you can look forward to! The great experience of learning something new, like: finding those invisable components after they take off in unknown directions. coordinating your hands while viewing through a x100 eye piece or viewer. My pulse rate just about doubles thinking of the FUN that's ahead with this project. (what ever happened to knobes; switches; 1/4w resistors; etc?) Ahhhhh....love radios that glow in the dark.

Carry-on
BillHarris w7kxb

----- Original Message -----
From: Garry<mailto:ve7ajj@...>
To: AT_Sprint@yahoogroups.com<mailto:AT_Sprint@yahoogroups.com>
Sent: Saturday, September 29, 2007 11:00 AM
Subject: [AT_Sprint] Re: +3.5 and +5 regulator outputs

Nah Johnathan. I doubt you are the only one to wonder about this stuff. My ATS-3b has arrived but I am waiting for the solder paste from Cash Olsen before attempting to do anything with it. I took a close look at the parts and I have to admit that I approach this build with great trepidation. I only hope my knowledge of radio basics is going to be sufficient to get me through the trouble shooting as I fully expect that there will be issues for me to deal with, not the least of which will be my inability to see adequately to do the assembly.

Just keep asking the questions. I have no doubt that they and the answers will be of great use to me.

Garry/Ve7ajj

1727. Re: Another Learning Curve to overcome. (ALC)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-29 22:58:39 UTC
From: Garry
Topic: 1726 Message: 1727

Time sure does move on doesn't it Bill. I first built a heathkit HW-101 some 35 years - 40 years ago..... And marveled that it all worked. and here today, other than for the higher power of the Heathkit and the SSB capabilities we have a tiny rig with as many bands that will fit in the space occupied by the 2 final tubes of the Heathkit (6146's I believe) with features that were only dreamt of back then. I 'll get the ATS-3b built. Question in my mind is, will I get it to work? HI

Still waiting for that solder paste.

I wasn't planning to put it in an Altoids style box, figuring that more room would be better but after seeing it and eyeing a "Fishermans Friend" box which I believe is identical to the Altoids, I'm thinking I may just go ahead. How neat to have such a multi-featured little rig in such a small container and the label/artwork on the Fishermans Friend box somehow seems more then appropriate. I may have to sit in the bathtub to build it in case I drop something but I'll be giving it a try.

73

Garry/Ve7ajj

--- In AT_Sprint@yahoogroups.com, "Bill Harris" <w7kxb@...> wrote:
>
> Garry:
> Think of what you can look forward to! The great experience of learning something new, like: finding those invisable components after they take off in unknown directions. coordinating your hands while viewing through a x100 eye piece or viewer. My pulse rate just about doubles thinking of the FUN that's ahead with this project. (what ever happened to knobes; switches; 1/4w resistors; etc?) Ahhhhh....love radios that glow in the dark.
>
> Carry-on
> BillHarris w7kxb
>
>
>
>
>
> ----- Original Message -----
> From: Garry<mailto:ve7ajj@...>
> To: AT_Sprint@yahoogroups.com<mailto:AT_Sprint@yahoogroups.com>
> Sent: Saturday, September 29, 2007 11:00 AM

> Subject: [AT_Sprint] Re: +3.5 and +5 regulator outputs
>
>
> Nah Johnathan. I doubt you are the only one to wonder about this
> stuff. My ATS-3b has arrived but I am waiting for the solder
paste
> from Cash Olsen before attempting to do anything with it. I took
a
> close look at the parts and I have to admit that I approach this
build
> with great trepidation. I only hope my knowledge of radio basics
is
> going to be sufficient to get me through the trouble shooting as I
> fully expect that there will be issues for me to deal with, not
the
> least of which will be my inability to see adequately to do the
> assembly.
>
> Just keep asking the questions. I have no doubt that they and the
> answers will be of great use to me.
>
> Garry/Ve7ajj
>

1728. U4 upside down. Be careful.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-30 13:17:49 UTC
From: kc7fys
Topic: 1728 Message: 1728

Ha! I found the varmint. U4 was in upside down. The instructions state that the print will be 'upside down,' but I had the jacks on the right, so my PCB was downside up! D'oh.
But when I fixed it--JOY on powerup. De-soldered and re-soldered pretty easily using hot air and a rolled up piece of beer can to focus the heat. Movin' forward!
http://www.flickr.com/photos/jonathancharles/sets/72157602077258104/
Jonathan

1729. Candle Warmer Hot Plate Photo

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-30 16:09:03 UTC
From: radio_kx0r
Topic: 1729 Message: 1729

I posted a photo of my candle warmer hot plate with heat spreader in the Photos section of this site - please see my previous post on this tool.

The 1/4" plate doesn't sit right top of the plastic ring around the candle warmer, even though it looks that way in the picture. Another aluminum plate .127" thick lies between the heater element's flat surface and the 1/4" aluminum heat spreader visible in the photo. They are held together by gravity.

George Carey Fuller
KX0R

1730. Re: Candle Warmer Hot Plate Photo

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-30 16:24:42 UTC
From: Bruce Beford
Topic: 1729 Message: 1730

--- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@...> wrote:
>
> I posted a photo of my candle warmer hot plate with heat spreader in
> the Photos section of this site - please see my previous post on this
> tool.
>

Thanks for posting the photo. I have one of these candle warmers, and
was trying to decide how/if I could use it for the ATS-3B board. I like
your elegant solution to increase the plate size.

73,
Bruce N1RX

1731. Re: Candle Warmer Hot Plate Photo

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-30 22:57:43 UTC
From: kc7fys
Topic: 1729 Message: 1731

> Thanks for posting the photo. I have one of these candle warmers, and
> was trying to decide how/if I could use it for the ATS-3B board. I like
> your elegant solution to increase the plate size.
> 73,
> Bruce N1RX

http://farm2.static.flickr.com/1031/1427463575_d5044a8fa7_b.jpg
My solution was far less elegant, but I found the plate IS big enough
if you remove the top half of the housing.
Jonathan 7J1AWL

1732. another ATS-3B (almost) complete

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-01 03:15:03 UTC
From: John Shadle
Topic: 1732 Message: 1732

Alright, so I still have to wind a bunch of toroids and finish the 6 band modules, but I'm finished with the main board. Woohoo!

I powered up a few minutes ago and received the "8" message. In my excitement, I unplugged the radio and urged my wife to put the headphones in her ears to hear it, too; however, most likely due to the short power on/off switch I got "E" instead. Things are fine now, though.

Steve, this truly was a fun kit to build. It was just the right amount of challenging (a somewhat experienced kit-builder with only two other small SMD kits under my belt) and very rewarding.

I've put some photos up on flickr.com for you all to enjoy. Hope you have a chance to check them out.

http://flickr.com/photos/shadle/sets/72157602215143718/

For those of you who don't want to check out the photos or were just generally interested, here is the order in which I completed the build.

1. resistors
2. ICs
3. caps, inductors
4. through-hole parts

Seemed to work well for me.

Take care and good night.
-john W4PAH

1733. Re: Is there a free spectrum analyzer app that you use?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-01 16:17:00 UTC
From: Randal
Topic: 1718 Message: 1733

I have just uploaded the free version of Spectragram into the "files"
section.

Think this may be of use. Used it all the time to adjust filters.

73,
Ran-W1IN

1734. Re: Candle Warmer Hot Plate Photo

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-02 03:17:57 UTC
From: rds_6
Topic: 1729 Message: 1734

To raise the hot plate above the plastic trim, I unscrewed the screws, separated the two halves, popped the hot plate out of the top half, pushed the hot plate through the hole in the top half (without bending the hot plate), then used some high-temperature RTV silicone sealant around the perimeter of the bottom of the hot plate to glue it to the top of the top housing, centered around the hole. Then, I reattached the bottom half using the original screws. Now, nothing protrudes above the surface of the hot plate itself. I don't have an AT Sprint board yet, so I don't know if the hot plate is big enough, but it has a diameter of about 3 7/8" (98 mm).
73,
Ross N0GSZ

1735. Re: Candle Warmer Hot Plate Photo

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-02 19:13:03 UTC
From: radio_kx0r
Topic: 1729 Message: 1735

--- In AT_Sprint@yahoogroups.com, "rds_6" <rds_6@...> wrote:
>
> To raise the hot plate above the plastic trim, I unscrewed the
screws,
> separated the two halves, popped the hot plate out of the top half,
> pushed the hot plate through the hole in the top half (without
bending
> the hot plate), then used some high-temperature RTV silicone sealant
> around the perimeter of the bottom of the hot plate to glue it to the
> top of the top housing, centered around the hole. Then, I reattached
> the bottom half using the original screws. Now, nothing protrudes
> above the surface of the hot plate itself. I don't have an AT Sprint
> board yet, so I don't know if the hot plate is big enough, but it has
a
> diameter of about 3 7/8" (98 mm).
> 73,
> Ross N0GSZ
>

Ross,

This sounds like a great way to improve the candle warmer. Mine was slightly smaller and wouldn't heat the entire board, so I decided on the heat spreading plate. I did open it up and thought about modifying it, but I decided that even heat was important, and the surface on mine looks pretty thin - so I decided to test the spreaders, and before I knew it, I was there.

The 1/4" spreader takes a long time to come up to full temperature, so it isn't ideal - maybe 1/8" or less would be a better compromise, since it's already on top of another 1/8" piece of aluminum.

I tried unsoldering some SMT parts on some scrap 2-sided unetched copperclad board, using my modified candle warmer and plates, and it only took 20 or 30 seconds with the embossing hot air tool at about 2" before the solder melted. I decided that I need more practice, so I went ahead and ordered some solder paste from Cash Olson along with a SMT dummy load kit from Norcal. If the dummy load goes well, I'm planning to solder msot of the ATS-3B with the reflow method.

I haven't decided whether to try to do both sides this way. The Norcal dummy load is two-sided, so it will be a good test.

Comments from people who have tried doing both sides with the warmer and hot air tool would be appreciated!

72/73
KX0R

1736. Re: [AT_Sprint] Re: Candle Warmer Hot Plate Photo

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-02 19:34:29 UTC
From: mbhayden
Topic: 1729 Message: 1736
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

1737. Re: [AT_Sprint] Re: Candle Warmer Hot Plate Photo

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-02 20:59:02 UTC
From: john
Topic: 1729 Message: 1737

Where do you get the candle warmers?

John

At 03:13 PM 10/2/2007, radio_kx0r wrote:
>--- In AT_Sprint@yahoogroups.com, "rds_6" <rds_6@...> wrote:
> >
> > To raise the hot plate above the plastic trim, I unscrewed the
>screws,
> > separated the two halves, popped the hot plate out of the top half,
> > pushed the hot plate through the hole in the top half (without
>bending
> > the hot plate), then used some high-temperature RTV silicone sealant
> > around the perimeter of the bottom of the hot plate to glue it to the
> > top of the top housing, centered around the hole. Then, I reattached
> > the bottom half using the original screws. Now, nothing protrudes
> > above the surface of the hot plate itself. I don't have an AT Sprint
> > board yet, so I don't know if the hot plate is big enough, but it has
>a
> > diameter of about 3 7/8" (98 mm).
> > 73,
> > Ross N0GSZ
> >
>
>Ross,
>
>This sounds like a great way to improve the candle warmer. Mine was
>slightly smaller and wouldn't heat the entire board, so I decided on
>the heat spreading plate. I did open it up and thought about modifying
>it, but I decided that even heat was important, and the surface on mine
>looks pretty thin - so I decided to test the spreaders, and before I
>knew it, I was there.
>
>The 1/4" spreader takes a long time to come up to full temperature, so
>it isn't ideal - maybe 1/8" or less would be a better compromise, since
>it's already on top of another 1/8" piece of aluminum.
>
>I tried unsoldering some SMT parts on some scrap 2-sided unetched
>copperclad board, using my modified candle warmer and plates, and it
>only took 20 or 30 seconds with the embossing hot air tool at about 2"
>before the solder melted. I decided that I need more practice, so I
>went ahead and ordered some solder paste from Cash Olson along with a
>SMT dummy load kit from Norcal. If the dummy load goes well, I'm
>planning to solder msot of the ATS-3B with the reflow method.
>

>I haven't decided whether to try to do both sides this way. The Norcal
>dummy load is two-sided, so it will be a good test.
>
>Comments from people who have tried doing both sides with the warmer
>and hot air tool would be appreciated!
>
>72/73
>KX0R
>
>
>
>
>
>Yahoo! Groups Links
>
>
>

1738. Re: Candle Warmer Hot Plate Photo

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-02 22:51:32 UTC
From: Bruce Beford
Topic: 1729 Message: 1738

--- In AT_Sprint@yahoogroups.com, john <johnmb@...> wrote:
>
>
> Where do you get the candle warmers?
>
> John
>

Got mine at Wal-Mart. Almost any place that sells Jar Candles will have these. Check you local dollar store or equivalent.

-Bruce N1RX

1739. Toroid Winding

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-03 03:04:10 UTC
From: Jim Fraser
Topic: 1739 Message: 1739

Hi All,

I have the main board of my ATS-3B about 99% complete and thought I'd take a break and do a couple filter boards (15m and 17m) for the inital power up test. Those 0603 resistors sure are tiny, lost one and also lost an 0805 capacitor! Fortunately a local electronic parts house carries surface mount devices and I was able to pick up replacements without bugging Steve.

Regarding the toroids, those of you who have built the 3B or earlier models, did you wind the toroids with the turns close-wound or spread out around the core? Which way would maximize the power output?

Thanks in advance,
Jim K6JF

1740. Re: [AT_Sprint] Toroid Winding

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-03 10:40:20 UTC
From: Michael Harnage
Topic: 1739 Message: 1740

Scrunching LF1 decreases power. Scrunching LF2
increases power.

Wind them spread out so that you can scrunch them.

I ended up not going with the turn values or C3F
values in the manual. I used something more like the
last ATS3A version filters. I get 2.5/2.6 watts with 9
volts and 4.5/4.6 watts with 12 volts. This is for
80/40/30/20, haven't built 17 or 15 yet, but will
probably modify those as well.

Dave/wa3off has done some good work on the filter
boards, he should chime in too.

-mike/w1mt

--- Jim Fraser <jimf53@...> wrote:

>
> Regarding the toroids, those of you who have built
> the 3B or earlier
> models, did you wind the toroids with the turns
> close-wound or spread
> out around the core? Which way would maximize the
> power output?
>

Catch up on fall's hot new shows on Yahoo! TV. Watch previews, get listings, and more!
http://tv.yahoo.com/collections/3658

1741. Re: Toroid Winding

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-03 13:17:15 UTC
From: Dave
Topic: 1739 Message: 1741

> Scrunching LF1 decreases power. Scrunching LF2
> increases power.

This probably depends on which module you are working with and whether or not you alter the turns count or caps values. That statement applied to my 40M module but my 80M module was the opposite, I think. More accurately, I think, is that scrunching the turns together increases the inductance. If you treat it like a matching network, it's a bit like tuning an antenna tuner. So far I've observed that scrunching both LF1 and LF2 may produce little change in output power while scrunching one and unscrunching the other seems to have more effect.

The way I have the filters operating, they seem to be transforming the 50 ohm antenna impedance down to about 17 ohms that the PA transistors see.

Pushing the output to 5W using 12V will definitely result in tripping the Tx overcurrent protection on occasion. Steve will probably hate me for saying it, but I ended up bumping the current limit up by 50% in my 3B so that it would be tolerant of slight mismatches during the antenna tuning process. At the unmodified current limit, there were times that I was tripping it even when operating the rig on only 8V with about 2W of output (when the untuned tuner was presenting a low impedance to the rig). Being an auto tuner, it will not adjust without a few seconds of output from the rig; with the original limit I had to switch to my ATS-3A for a signal to get the tuning cycle completed. Using a manual tuner like one of Steve's designs probably would not give as much difficulty.

Dave, WA3OFF

1742. Re: Toroid Winding

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-03 15:50:45 UTC
From: radio_kx0r
Topic: 1739 Message: 1742

--- In AT_Sprint@yahoogroups.com, "Jim Fraser" <jimf53@...> wrote:
>
> Hi All,
>
> I have the main board of my ATS-3B about 99% complete and thought I'd
> take a break and do a couple filter boards (15m and 17m) for the
inital
> power up test. Those 0603 resistors sure are tiny, lost one and also
> lost an 0805 capacitor! Fortunately a local electronic parts house
> carries surface mount devices and I was able to pick up replacements
> without bugging Steve.
>
> Regarding the toroids, those of you who have built the 3B or earlier
> models, did you wind the toroids with the turns close-wound or spread
> out around the core? Which way would maximize the power output?
>
> Thanks in advance,
> Jim K6JF

Jim,

For my ATS-3A, I changed a few of the components a little bit, just to get a bit more output. Scrunching or separating turns may be all you need to do. Adding or subracting associated capacitance also may be useful to maximize output. Be sure to watch the supply current, because just maximizing the output isn't good if efficiency goes down too much.

Your results may depend on whether you plan to run mostly at 9V or 12V or whatever. The supply voltage affects the final drain impedance and also the drive level to the mosfets, so the output network may not be optimum across the entire supply range from 6 to 12V. It's a judgment call, and each band is different.

Remember that there are tolerance issues for the toroids and capacitors, so we have several variables that affect the optimum tuning on each module. This will be true for most any solid-state final you build, if you want to max it out.

George Carey Fuller
KX0R

1743. Re: Candle Warmer Hot Plate Photo

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-03 15:54:02 UTC
From: radio_kx0r
Topic: 1729 Message: 1743

--- In AT_Sprint@yahoogroups.com, mbhayden <mbhayden@...> wrote:
>
> i'm following the exact same procedure (including the norcal
training...).
>
> am i correct that when i get to the 3B all the SMT parts on the
side are
> done at once; then all the SMT parts on the second side of the
board are
> done in a second identical operation? and the parts on the first
side don't
> fall off in the process?
>
> mike, ak3f
>
>
> On 10/2/07, radio_kx0r <careyfuller@...> wrote:
> >
> > modified candle warmer and plates, and it
> > only took 20 or 30 seconds with the embossing hot air tool at
about 2"
> > before the solder melted. I decided that I need more practice, so
I
> > went ahead and ordered some solder paste from Cash Olson along
with a
> > SMT dummy load kit from Norcal. If the dummy load goes well, I'm
> > planning to solder msot of the ATS-3B with the reflow method.
> >
> > I haven't decided whether to try to do both sides this way. The
Norcal
> > dummy load is two-sided, so it will be a good test.
> >
> > Comments from people who have tried doing both sides with the
warmer
> > and hot air tool would be appreciated!
> >
> > 72/73
> > KX0R
> >

Mike,

That's the plan. As long as the hot air tool is used carefully on
the top side, the bottom side of the board shouldn't get hot enough
to reflow, and the parts already soldered should stay on.

KX0R

1744. Re: Candle Warmer Hot Plate Photo

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-03 15:57:47 UTC
From: radio_kx0r
Topic: 1729 Message: 1744

--- In AT_Sprint@yahoogroups.com, john <johnmb@...> wrote:
>
>
> Where do you get the candle warmers?
>
> John
>
I found mine while walking out of Hobby Lobby after finding the
embossing tool (hot air device). They're with the scented glass
candles. Try to get one with at least 15 watts and a large diameter.
You may have to do mods anyhow. Please read various previous posts and
look at the photos here.

KX0R

1745. Re: [AT_Sprint] Re: Candle Warmer Hot Plate Photo

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-03 16:22:43 UTC
From: Kurt Savegnago
Topic: 1729 Message: 1745

I'm going to go with a standard hotplate with a piece
of metal over the element. Folks say the temp is
right
when water just boils on the surface,

Going to do one side and then put screw spacers in
the mounting holes and then do the other side. Been
told that is one way to keep the components off of the

hot metal. With a lower powered candle warmer, I
suspect the components would be O.K. touching the
surface.

Also, the hotplate has more than enough surface area
to get the job done.

Kurt
--- radio_kx0r <careyfuller@...> wrote:

> --- In AT_Sprint@yahoogroups.com, john <johnmb@...>
> wrote:
> >
> >
> > Where do you get the candle warmers?
> >
> > John
> >
> I found mine while walking out of Hobby Lobby after
> finding the
> embossing tool (hot air device). They're with the
> scented glass
> candles. Try to get one with at least 15 watts and
> a large diameter.
> You may have to do mods anyhow. Please read various
> previous posts and
> look at the photos here.
>
> KX0R
>
>
>
>
> Yahoo! Groups Links
>
>
>

>
>

Slackware user since 1994

1746. Re: [AT_Sprint] Re: Candle Warmer Hot Plate Photo

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-03 17:12:01 UTC
From: W2AGN
Topic: 1729 Message: 1746

Kurt Savegnago wrote:
> I'm going to go with a standard hotplate with a piece
> of metal over the element. Folks say the temp is
> right
> when water just boils on the surface,
>
After reading all the hot plate, candel warmer, toaster oven and other kludge methods for doing SMT, I sprang $99 on Ebay and got a Madell 850B SMD Rework station. It has 2 nozzles, one small enough to do one component at a time. Works great. I use Cash's solder paster in a tube, and just do 5-10 components, hit them with the hot air, and they just snuggle down onto their pads.

Naturally I had to screw something up. I put BOTH 612N's in backwards. No sweat, used the large nozzle, heated them up and tap the board on the tray I work in, and off they come, neat and ready to be put back right side up.

No warming the board, no having to do all the components at one sitting, and only one heat source to mess with. Beats the heck out of the old slobbering iron. Even the tiny 0603 size things went on easy.

Best $99 I ever spent. (Note, they sell "in stores for around $200, but watch the auctions and you can get one for around $99-130 easily).

_ _ _ _ _
/ \ / \ / \ / \ / \ John L. Sielke
(W)(2)(A)(G)(N) http://w2agn.net
_/ _/ _/ _/ _/ http://www.blurty.com/users/w2agn
check out: http://groups.yahoo.com/group/QRPariahs/

1747. Wrap-up on ATS 3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-05 07:24:12 UTC
From: kc7fys
Topic: 1747 Message: 1747

Well, I got it into a nice Ginger Altoids tin, and although I'm not completely finished winding all the toroids and making all the band modules, I made my first QSO the other day with JA2 and got a 569 report. (That's quite local for me here in JA1). I went ahead and used a Maldol vertical out on my 4th floor balcony, tuned through my BLT tuner on 40 meters.

All the reviews on eham and elsewhere are right. This is a dynamite little rig. I'm amazed. I can tell right away I'm going to have fun bringing it with me places. And (surprise) will actually have lots of QSOs with it.

I'm rather sad to have cooled the soldering iron, actually.

For my first somewhat serious SMT project--I am thrilled at how simple hot air soldering is compared to all the talk it's getting here on the list. There is a pretty good air soldering tool project at http://hans-w.com/surfacem.htm and if you google it, you'll find others. I was really freaked out about not soldering both sides at once, about having to de-solder U4 to flip it, and just generally doing the Cash Olsen Shuffle. In reality, sections of the board can be soldered at a time, and in the end I started working without the vaunted candle warmer, and had just the same results. It did help to sort of keep the board hotter for the initial big air solder session. I could have done without it, though. Anyway, I'm a believer.

On the air, I just love the stepped sound of bringing in a station. This is my first experience using digital tuning, and it works great even for a dork like myself. Actually it sounds keyboard-like when tuning past a station.

I would like somewhat louder audio, and to be able to turn it down. I have a pretty big rock-related hearing loss at around 3-4K, and am considered hard of hearing by many close to me. That's one mod I might consider doing. I actually find myself confused by the LED and audio annunciation at once. I never expected that--but somehow reading and listening is something I've never done a lot of before. Like chewing gum and operating QRP on a bicycle at the same time.

Also, the software revision--I am suspecting that may be refined sometime down the line when more of the 3Bs are up and running. I look forward to my first experience doing that. It looks fun.

Thanks, Steve, and others for making such a satisfying kit that actually turns into a super-fun radio when all the building fun is finished. I built mine in an altoids tin, just to keep it 'stock,' but used a BNC rather than the provided RCA for antenna connect. The

40-9er, Rock Mite, Tenna Dipper, and BLT were excellent primers for this nice piece of equipment. I anticipate maybe putting it into a heftier housing in the future--maybe something with recessed 'dimples' for the 4 buttons, to cut down on the abuse they may get from handling the rig.

I think I learned a lot in the process of building it.

Photos:
http://www.flickr.com/photos/jonathancharles/sets/72157602077258104/
Thanks and 73,
Jonathan KC7FYS/7J1AWL

1748. NUE-PSK digital modem and ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-05 16:08:18 UTC
From: john shadle
Topic: 1748 Message: 1748

Just saw this announced on another QRP group and wondered what you guys thought about it. Would it work with the ATS-3B?

http://www.amqrp.org/kits/nue-psk31/index.html

-john W4PAH

1749. Re: [AT_Sprint] NUE-PSK digital modem and ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-05 16:27:09 UTC
From: W2AGN
Topic: 1748 Message: 1749

john shadle wrote:
> Just saw this announced on another QRP group and wondered what you guys
> thought about it. Would it work with the ATS-3B?
>
> http://www.amqrp.org/kits/nue-psk31/index.html
>
> -john W4PAH

From the description, I would so no. It generates AFSK. The ATS-3B works only with Pocketdigi.

I find it interesting that for some years, AmQRP promised a stand-alone PSK-31 unitimplemented on the Micro-908 kit. After buying that kit, looking forward to this addition, I see they have now gone to an entirely new kit for PSK. Based on past experience, with their goal of having it ready by "November," I would ask "which November?"

_ _ _ _ _
/ \ / \ / \ / \ / \ John L. Sielke
(W)(2)(A)(G)(N) http://w2agn.net
_/ _/ _/ _/ _/ http://www.blurty.com/users/w2agn
check out: http://groups.yahoo.com/group/QRPariahs/

1750. Re: [AT_Sprint] NUE-PSK digital modem and ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-05 16:55:06 UTC
From: Michael Harnage
Topic: 1748 Message: 1750

Doubt it would work with the ATS3B. You could probably
rig it to receive but transmitting would be the
problem.

-mike/w1mt

--- john shadle <shadle@...> wrote:

> Just saw this announced on another QRP group and
> wondered what you guys
> thought about it. Would it work with the ATS-3B?
>

Be a better Heartthrob. Get better relationship answers from someone who knows. Yahoo!
Answers - Check it out.
http://answers.yahoo.com/dir/?link=list&sid=396545433

1751. Wrong value zener sent with second run ATS3-B kits

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-05 16:52:06 UTC
From: Steven Weber
Topic: 1723 Message: 1751

I just found out I sent 6.8 volt zeners in the second run ATS-3B kits instead of 47 volts ones. Somehow 1N4757 turned into 1N4737 when the order was placed. Maybe I couldn't read my own writing!

The rig will work okay for the moment with out the zener, its just an added layer of protection against high swr. If you put the zener I sent in place, it will likely trip the over current protector when you key the rig.

I'll need to order the correct ones and figure out who I sent the wrong ones to. That will take about a week. Sorry if this causes you and trouble. You know if you have a 2nd run kit from the folder on the CD labled "ATS-3B run2" and is also indicated at the bottom of the title page of the manual.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

1752. Moving Green Trimmers??

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-05 17:42:39 UTC
From: Jim Fraser
Topic: 1752 Message: 1752

For those of you who have completed the ATS-3B, in the band filter test and adjustent section, step 3 states:

3. On Band modules using the green trimmers, remove them from the bottom side of the board and relocate them to the top side of the board, then solder into place.

Does this mean that after adjusting the trimmers on the 80/40m modules we need to move them to the other side of the board???

Jim K6JF

1753. Re: Wrong value zener sent with second run ATS3-B kits

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-05 17:48:05 UTC
From: rds_6
Topic: 1723 Message: 1753

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
>
> I just found out I sent 6.8 volt zeners in the second run ATS-3B
kits
> instead of 47 volts ones. Somehow 1N4757 turned into 1N4737 when

Perhaps you meant "1N4756 turned into 1N4736?" I'm looking through the antistatic bag of my kit and see a "4736" on a diode, so I assume I need a 1N4756 as a replacement.

> You know if you have a 2nd run kit from the folder on the CD
labled "ATS-3B
> run2" and is also indicated at the bottom of the title page of the
manual.

My folder is titled "ATS3B CD R2" and the bottom of the title page reads "Revised for second 100 kits September 24, 2007," so clearly I have one of the second run kits.

I'll e-mail you my shipping address. Thanks again for all of your tireless efforts!
73,
Ross N0GSZ

1754. Re: NUE-PSK digital modem and ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-05 18:08:55 UTC
From: rds_6
Topic: 1748 Message: 1754

--- In AT_Sprint@yahoogroups.com, "john shadle" <shadle@...> wrote:
> Would it work with the ATS-3B?

I asked Milt W8NUE about that two weeks ago. He and I theorized about it a bit but decided we would need more information from Vojtech OK1IAK and/or Steven KD1JV as to how they got the Pocketdigi to work with the AT Sprint 3B before we could try to implement something similar with the NUE-PSK. So, if someone could provide details of the Pocketdigi + AT Sprint 3B implementation, I'd greatly appreciate it.
0111 0010,
Ross N0GSZ

1755. Re: Moving Green Trimmers??

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-05 18:54:28 UTC
From: Dave
Topic: 1752 Message: 1755

> Does this mean that after adjusting the trimmers on the 80/40m modules
> we need to move them to the other side of the board???

All trimmers should end up on the same side of the board as the toroids.

I believe Steve was able to ship all kits with bottom-adjust trimmers
that do not need to be temporarily mounted on the opposite side of the
board for access during adjustment:

http://groups.yahoo.com/group/AT_Sprint/message/1464

Dave, WA3OFF

1756. Re: Moving Green Trimmers??

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-05 19:22:17 UTC
From: Jim Fraser
Topic: 1752 Message: 1756

Dave,

My green trimmers are the bottom-adjust type so it I thought it was odd that it was mentioned to move them. I will scratch out that step in the manual. Thanks.

Jim K6JF

--- In AT_Sprint@yahoogroups.com, "Dave" <dmertz@...> wrote:
>
> > Does this mean that after adjusting the trimmers on the 80/40m modules
> > we need to move them to the other side of the board???
>
> All trimmers should end up on the same side of the board as the toroids.
>
> I believe Steve was able to ship all kits with bottom-adjust trimmers
> that do not need to be temporarily mounted on the opposite side of the
> board for access during adjustment:
>
> http://groups.yahoo.com/group/AT_Sprint/message/1464
>
> Dave, WA3OFF
>

1757. Re: [AT_Sprint] NUE-PSK digital modem and ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-05 20:33:07 UTC
From: Steven Weber
Topic: 1748 Message: 1757

>Doubt it would work with the ATS3B. You could probably
>rig it to receive but transmitting would be the
>problem.

It wouldn't work for transmitting, as doing digi-modes with the ATS-3B is a whole different scheme. I wish them luck with the gaget, but I'd think a Pocket PC with Pocketdigi would be a better way to go. I'm sure that would work a whole lot better plus be smaller and lighter. A brand new PDA probably won't cost much more than what they will have to charge for the kit. Too bad they didn't go with a color grahics display, though those are kinda expensive.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

1758. Re: [AT_Sprint] Re: Moving Green Trimmers??

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-09-05 20:49:46 UTC
From: Steven Weber
Topic: 1752 Message: 1758

>I believe Steve was able to ship all kits with bottom-adjust trimmers
>that do not need to be temporarily mounted on the opposite side of the
>board for access during adjustment:
>
That was true for the first 100, but after that there were no more
avaliable, so had to use the top adjust ones I had previously bought by
mistake.

There were enough of the brown bottom adjust ones available, (and I bought
every last one both Mouser and Digi-Key had) so those don't need to be
moved. I hope the instructions are clear enough on that point. Its only the
green ones which have the issue.

Mouser might continue to carry the bottom adjust trimmers, its just that
they won't have any more for 10 or more weeks. For Digi-Key, thier now a
non-stocking item with a 1500 piece min order and no indication on how long
it would take to get them. I guess I'm the only one who has been buying
these things and if there is ever to be another run of ATS-3 type kits,
might have to figure out a way to use some other type of trimmer.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

1759. AT Sprint III

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-05 21:45:46 UTC
From: larrypgrahn
Topic: 1759 Message: 1759

I am at the Check out and Calibrateion part of the kit.

I gave it power and heard the "ATS-2"

Went to "Reference Oscillator Frequency Calibration"
Applied power and heard "CF"

Sent the frequency to 10 MHz

Clicked the MENU and heard the"CO"

DID NOT hear the low pitched tone in the headphones.

Have checked everything as far a soldering orientation of ICs

I need some help.

Larry KB8HJJ

1760. Re: AT Sprint III

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-05 22:54:08 UTC
From: w1mt
Topic: 1759 Message: 1760

On the schematic, start at pin 19 of U6 (ad9834) and trace thru the dds output filter to DDS_LO, then on to the 1st rx mixer (U1/SA612) thru the analog switches (U8 and U9) then thru the next mixer U2/sa612, then U3, U4 and finally U5. It will be somewhere in that path. Reinspect all parts on that path. A wooden toothpick can help find a leg that might be not soldered but look OK. Good luck.

-mike/w1mt

--- In AT_Sprint@yahoogroups.com, "larrypgrahn" <larrypgrahn@...> wrote:

> I need some help.
>
> Larry KB8HJJ
>

1761. Re: [AT_Sprint] Re: NUE-PSK digital modem and ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-06 00:44:59 UTC
From: Vojtěch Bubník
Topic: 1748 Message: 1761

Hi Ross.

The ATS-3b protocol is no secret. You can download the whole C source of PocketDigi at pocketdigi.sourceforge.net. Look for the pocketdigi-1.0.10-src.zip archive. It would be my pleasure to help you guys with porting the interface to your new hardware.

I wonder how the solution compares to PocketDigi on Pocket PC. The main weakness of Pocket PC is its high current consumption. From my experience it seems that the backlight takes about half the current. Some of the PDAs are equiped with transreflexive displays, which are somehow readable without backlight.

If I remember it correctly, PocketDigi running on my legacy iPaq 3630 with backlight off takes about 250mA current at 4V. That compares very well to NUE's 8V at 165mA, the PocketPC is even slightly more power efficient. I bet I can buy a used Pocket PC device at e-bay for the price of NUE-psk parts.

I think, that there is an opportunity though for NUE-psk to beat the Pocket PC solution in terms of power consumption by using single small reflective LCD display, powering it from single LiPol cell, optimizing the DSP algorithms and lowering system clock etc. It is a great kit for those that want to build their own computer.

73, Vojtech OK1IAK

> --- In AT_Sprint@yahoogroups.com, "john shadle" <shadle@...> wrote:
> > Would it work with the ATS-3B?
>
> I asked Milt W8NUE about that two weeks ago. He and I theorized about
> it a bit but decided we would need more information from Vojtech OK1IAK
> and/or Steven KD1JV as to how they got the Pocketdigi to work with the
> AT Sprint 3B before we could try to implement something similar with
> the NUE-PSK. So, if someone could provide details of the Pocketdigi +
> AT Sprint 3B implementation, I'd greatly appreciate it.
> 0111 0010,
> Ross N0GSZ

1762. Re: [AT_Sprint] Re: NUE-PSK digital modem and ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-06 00:48:48 UTC
From: John A. Evans - N0HJ
Topic: 1748 Message: 1762

Well, according to the AMQRP Club specs, the NUE-PSK weighs 2.5 lbs - that is enough for me to pass it by - you won't find me backpacking with an extra 2.5 lbs just to do psk. My new Dell AXIM X30 weighs in at 4.9 oz with the standard battery pack. Add to that the weight of the added circuit to hook it up to the ATS-3B and you've got an idea of the weight difference.

72 - john - n0hj

Vojte(ch Bubn?k wrote:
>
> Hi Ross.
>
> ...
>
> I wonder how the solution compares to PocketDigi on Pocket PC.
>

1763. A couple of hopefully benign ATS3B R2 discrepancies?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-06 04:28:22 UTC
From: rds_6
Topic: 1763 Message: 1763

I soldered all of the SMT parts onto my ATS3B R2 board this evening. I was going to use my newly modified candle warmer and embossing gun, but I haven't had a chance to borrow a friend's solder paste yet, so I just soldered it all by hand. The TSSOP DDS was the only part I had to resort to flood & wick, which worked fine.

I noticed the following two minor discrepancies (besides the 47-volt zener diode issue):

1) The 0.15uH L4, which was supposed to be marked with a yellow sticker, was instead marked with green marker (or at least I hope it was -- I installed something marked with green marker at L4).

2) The "real U11" MCP120T-3151, which was properly marked with green, had the marking "SL96" on it instead of "SLFJ." I hope that's not a problem.

Also, on pages 15 and 20, the 22K resistors were described as 0805 size, but all of mine were 0603 size, but that doesn't concern me in the least.

73,
Ross N0GSZ

1764. Re: Moving Green Trimmers??

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-06 18:47:40 UTC
From: Dave
Topic: 1752 Message: 1764

> That was true for the first 100, but after that there were no more
> avaliable, so had to use the top adjust ones I had previously
> bought by mistake.

I had wondered about that. I figured you would correct me if that
was the case. :-)

Something that might be cheap and easy would be to provide a right-
angle pin header and an extra header socket to build an extender.
I built one like that to be able to access the main-board area under
the band module while the module was installed. It puts the band
module in a vertical position that should allow access to the
trimmers.

Dave, WA3OFF

1765. Re: Moving Green Trimmers??

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-06 22:57:11 UTC
From: Buddy Brown
Topic: 1752 Message: 1765

When I built the ATS3A, I had this problem. I simply made a 90 degree
adapter for the filter
and made the adjustments (from below), then, removed the adapter.
Buddy - N5BUD

<http://groups.yahoo.com/group/AT_Sprint/message/1758;_ylc=X3oDMTJyb2k4bjFxB
F9TAzk3MzU5NzE1BGdycElkAzE4MDM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARtc2dJZAMxNzU4B
HNlYwNkbXNnBHNsawN2bXNnBHN0aW1lAzExOTE2NjM0OTc-> Re: Moving Green Trimmers??

Posted by: "Steven Weber" <mailto:kd1jv@...?Subject=
Re%3A%20Moving%20Green%20Trimmers%3F%3F> kd1jv@...
<http://profiles.yahoo.com/kd1jv> kd1jv

Fri Oct 5, 2007 1:53 pm (PST)

>I believe Steve was able to ship all kits with bottom-adjust trimmers
>that do not need to be temporarily mounted on the opposite side of the
>board for access during adjustment:
>
That was true for the first 100, but after that there were no more
avaliable, so had to use the top adjust ones I had previously bought by
mistake.

There were enough of the brown bottom adjust ones available, (and I bought
every last one both Mouser and Digi-Key had) so those don't need to be
moved. I hope the instructions are clear enough on that point. Its only the
green ones which have the issue.

Mouser might continue to carry the bottom adjust trimmers, its just that
they won't have any more for 10 or more weeks. For Digi-Key, thier now a
non-stocking item with a 1500 piece min order and no indication on how long
it would take to get them. I guess I'm the only one who has been buying
these things and if there is ever to be another run of ATS-3 type kits,
might have to figure out a way to use some other type of trimmer.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
<http://kd1jv.qrpradio.com/> http://kd1jv.qrpradio.com

1766. I need a bigger Altoids tin. Maybe a Wheaties Box?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-07 09:46:06 UTC
From: kc7fys
Topic: 1766 Message: 1766

I wonder if an incorrect 7-segment LED was shipped to me. Or, maybe my
Altoids tin shrank. Hm.
http://farm3.static.flickr.com/2360/1502082609_bbe80e2d06_o.jpg
Hi hi.
Jonathan

1767. Re: [AT_Sprint] I need a bigger Altoids tin. Maybe a Wheaties Box?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-07 11:33:42 UTC
From: Gil Stacy
Topic: 1766 Message: 1767
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

1768. Re: AT Sprint III

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-07 15:29:27 UTC
From: larrypgrahn
Topic: 1759 Message: 1768

--- In AT_Sprint@yahoogroups.com, "w1mt" <w1mt@...> wrote:
>
> On the schematic, start at pin 19 of U6 (ad9834) and trace thru the
> dds output filter to DDS_LO, then on to the 1st rx mixer (U1/SA612)
> thru the analog switches (U8 and U9) then thru the next mixer
> U2/sa612, then U3, U4 and finally U5. It will be somewhere in that
> path. Reinspect all parts on that path. A wooden toothpick can help
> find a leg that might be not soldered but look OK. Good luck.
>
> -mike/w1mt
>
> --- In AT_Sprint@yahoogroups.com, "larrypgrahn" <larrypgrahn@>
wrote:
>
> > I need some help.
> >
> > Larry KB8HJJ
> >
>
Mike/W1MT
Thank you for the reply. I have worked on the project this morning
starting as instructed, but with no success. Still no sound.
I do not know were to go from here.

Larry/KB8HJJ

1769. Re: [AT_Sprint] Re: AT Sprint III

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-07 16:15:43 UTC
From: Gil Stacy
Topic: 1759 Message: 1769
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

1770. SUCCESS!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-07 15:51:10 UTC
From: W2AGN
Topic: 1770 Message: 1770

This was my first attempt at using the solder paste method for SMD construction.
I did not use the hot plate/embossing tool, but purchased an "SMD Rework station."

This thing make working with SMD easier than leaded stuff. I did use the solder
paste in the syringe from Cash Olsen, as it made applying the stuff a snap. I
still have enough left in my $5.00 syringe to build another one (or my QBSA).

The "proof of the pudding" came today, when I applied power...and it worked,
first time! I have built all the ATS series, and this is the first that I had
work right away, no troubles. (I caught, and fixed my reversed 612's early).
--

_ _ _ _ _
/ \ / \ / \ / \ / \ John L. Sielke
(W)(2)(A)(G)(N) http://w2agn.net
_/ _/ _/ _/ _/ http://www.blurty.com/users/w2agn
check out: http://groups.yahoo.com/group/QRPariahs/

1771. SMD Desoldering Trick #1

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-07 22:55:22 UTC
From: Steve Galchutt
Topic: 1771 Message: 1771

Just wanted to share a really NEAT trick my bro-inlaw recently passed on for desoldering misplaced or misaligned SMD components. Using two solder irons like a pair of tweezers works like a champ! But be careful not to flip or drop the dang thing into the black hole (your carpeting)! Actually one of my irons is slightly magnetized and parts seem stick to it? Even when you don't want them to!!!

YMMV Cheers, Steve/n0tu

1772. Re: SMD Desoldering Trick #1

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-07 23:23:28 UTC
From: Bruce Beford
Topic: 1771 Message: 1772

--- In AT_Sprint@yahoogroups.com, "Steve Galchutt" <n0tu.qrp@...> wrote:
>
> Just wanted to share a really NEAT trick my bro-inlaw recently passed
> on for desoldering misplaced or misaligned SMD components. Using two
> solder irons like a pair of tweezers works like a champ!

I have used this method for a long time. Works great for two-contact components like resistors and capacitors.

-Bruce N1RX

1773. Re: AT Sprint III

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-08 00:06:20 UTC
From: larrypgrahn
Topic: 1759 Message: 1773

--- In AT_Sprint@yahoogroups.com, "Gil Stacy" <gilstacy@...> wrote:
>
> Larry,
> Use the tip of your solder iron and re-heat the joints in the same path that
> Mike specified.
> 73, Gil NN4CW
>
Gil,
Found the problem. X5 is missing.

Larry

1774. Re: [AT_Sprint] Re: AT Sprint III

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-08 00:41:03 UTC
From: Gil Stacy
Topic: 1759 Message: 1774
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

1775. Re: [AT_Sprint] Re: AT Sprint III

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-08 01:21:09 UTC
From: Michael Harnage
Topic: 1759 Message: 1775

That'll do it. Does it work now?

-mike/w1mt

--- larrypgrahn <larrypgrahn@...> wrote:
> Found the problem. X5 is missing.

_____
Be a better Globetrotter. Get better travel answers from someone who knows. Yahoo! Answers - Check it out.
http://answers.yahoo.com/dir/?link=list&sid=396545469

1776. Hot Air Tools Work

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-08 05:57:32 UTC
From: radio_kx0r
Topic: 1776 Message: 1776

I just built a NorCal SMT dummy load using my modified candle warmer with heat spreader plate, embossing tool hot air device, and the Cash Olson solder paste and method.

Everything worked nicely first try. I can't believe the way the parts dance into alignment when the solder melts!

When I soldered the parts on the second side, I decided to support the board so the soldered parts on the lower side weren't in direct contact with the hot spreader plate - just in case they reflowed. Others have suggested using screws to raise the board - I tried something easier. Just raise the board with coins. I allowed several minutes for the preheat, and then the second side soldered just as well as the first, once the hot air tool did its magic.

Looks like the method and tools are appropriate for the ATS-3B! Now I just have to do the job...

KX0R
Carey Fuller

1777. Re: AT Sprint III

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-08 10:59:42 UTC
From: larrypgrahn
Topic: 1759 Message: 1777

```
--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:
>
> That'll do it. Does it work now?
>
> -mike/w1mt
>
> --- larrypgrahn <larrypgrahn@...> wrote:
> > Found the problem. X5 is missing.
>
> Mike,KB8HJJ
8
>
>
>

------------------------------------------------------------------------
--------------
> Be a better Globetrotter. Get better travel answers from someone
who knows. Yahoo! Answers - Check it out.
> http://answers.yahoo.com/dir/?link=list&sid=396545469
>
```

1778. AST3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-08 12:18:26 UTC
From: larry_draughn
Topic: 1778 Message: 1778

This is the first posting to the group from me so I hope that it's not out of place. I sent a big thank you to Steve in regards to his new rig and how pleased I am with the results. I just wanted to put a plug to the group, and state how much fun this rig has been to construct, it worked perfect without a glitch anywhere and this was my first surface mount attempt. I used the old hand solder method with a large lighted microscope which made things very simple. A good friend aligned the unit for me and he also commented on how great this unit is, again this has been a most enjoyable project and look forward to a lot of use and more projects from Steve. Thanks AE4LD Larry

1779. Re: [AT_Sprint] SUCCESS!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-08 13:10:19 UTC
From: mstangelo@comcast.net
Topic: 1770 Message: 1779

John,

I'm interested in using this method. Which SMD Rework Station did you use?

73,

Mike N2MS
---------- Original message ----------
From: W2AGN <w2agn@...>

> This was my first attempt at using the solder paste method for SMD construction.
> I did not use the hot plate/embossing tool, but purchased an "SMD Rework
> station."
>
> This thing make working with SMD easier than leaded stuff. I did use the solder
> paste in the syringe from Cash Olsen, as it made applying the stuff a snap. I
> still have enough left in my $5.00 syringe to build another one (or my QBSA).
>
> The "proof of the pudding" came today, when I applied power...and it worked,
> first time! I have built all the ATS series, and this is the first that I had
> work right away, no troubles. (I caught, and fixed my reversed 612's early).

1780. Re: [AT_Sprint] SUCCESS!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-08 13:35:39 UTC
From: W2AGN
Topic: 1770 Message: 1780

mstangelo@... wrote:
> John,
>
> I'm interested in using this method. Which SMD Rework Station did you use?
>
> 73,
>
> Mike N2MS
>

I used the Madell 850B SMD Rework station. I sent the procedure I used to someone else in private email, but it might be of interest to the group, so here it is.

1. Set Air at 2 and Heater at 350 on the station. I used the small nozzle. Too much air and the parts blow off the board ;-)

2. Apply tiny dab of solder with syringe to pads of circuit board. For IC's I used a THIN bead of solder along the pin pads.

3. Place component with tweezers onto pads. I had planned to do a bunch at a time, but found I kept bumping components off the pads, so I ended up doing 5-10 at a time.

4. Place board in metal pan, or on tray. This is just to protect your work surface from heat, although I don't think it is really necessary.

5. Turn on station. It only takes about 30 seconds-1 minute to be ready. Blinking light tells you when.

6. Hold nozzle about 1-2" above component. Watch in amazement as in a few seconds, solder melts and component "snuggles" into place.

7. If you have to move a component, heat as above, and while holding tool in one hand, simply pick up the part with tweezers held in other hand.

No Cup warmers, pre-heating board, etc. It goes really fast. What's neat is you can do a few, take a break, and come back and do some more.You aren't forced to doe the whole baord at one sitting. Oh yes, No problems doing the other side of the board. No components loosening up on opposite side, etc. I did chicken out and solder the LED readout and jacks manually, fearing I might melt them.

I like Cash Olsen's paste because it comes pre-packaged in a syringe. I also got the larger needle he sells for $1.00, as I found the fine one did take a lot of pressure. Solder paste should be stored in the refrigerator, as it does not keep well. The only other sources I saw sold it in bulk, and you wouldn't ever use that much. One $5.00 syringe from Cash will do at least 2 ATS3Bs.

1781. Re: [AT_Sprint] SUCCESS!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-08 14:45:56 UTC
From: Lee Mairs (SAG)
Topic: 1770 Message: 1781

Nice post, John. Good information. I can't wait for my Madell SMD
Rework Station to arrive here in WBGV.
73 de Lee
KM4YY/8
NNN0IOF

W2AGN wrote:
> mstangelo@... wrote:
>> John,
>>
>> I'm interested in using this method. Which SMD Rework Station did you use?
>>
>> 73,
>>
>> Mike N2MS
>>
>
> I used the Madell 850B SMD Rework station. I sent the procedure I used to
> someone else in private email, but it might be of interest to the group, so here
> it is.
>
> 1. Set Air at 2 and Heater at 350 on the station. I used the small nozzle. Too
> much air and the parts blow off the board ;-)
>
> 2. Apply tiny dab of solder with syringe to pads of circuit board. For IC's I
> used a THIN bead of solder along the pin pads.
>
> 3. Place component with tweezers onto pads. I had planned to do a bunch at a
> time, but found I kept bumping components off the pads, so I ended up doing 5-10
> at a time.
>
> 4. Place board in metal pan, or on tray. This is just to protect your work
> surface from heat, although I don't think it is really necessary.
>
> 5. Turn on station. It only takes about 30 seconds-1 minute to be ready. Blinking
> light tells you when.
>
> 6. Hold nozzle about 1-2" above component. Watch in amazement as in a few
> seconds, solder melts and component "snuggles" into place.
>
> 7. If you have to move a component, heat as above, and while holding tool in one
> hand, simply pick up the part with tweezers held in other hand.
>
>
> No Cup warmers, pre-heating board, etc. It goes really fast. What's neat is you

> can do a few, take a break, and come back and do some more.You aren't forced to
> doe the whole baord at one sitting. Oh yes, No problems doing the other side of
> the board. No components loosening up on opposite side, etc. I did chicken out
> and solder the LED readout and jacks manually, fearing I might melt them.
>
> I like Cash Olsen's paste because it comes pre-packaged in a syringe. I also got
> the larger needle he sells for $1.00, as I found the fine one did take a lot of
> pressure. Solder paste should be stored in the refrigerator, as it does not keep
> well. The only other sources I saw sold it in bulk, and you wouldn't ever use
> that much. One $5.00 syringe from Cash will do at least 2 ATS3Bs.
>
>
>
>
> Yahoo! Groups Links
>
>
>
>

1782. OT: looking for a ride to Pacificon

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-08 17:58:57 UTC
From: John Shadle
Topic: 1782 Message: 1782

Hi,
I'm going to be visiting a friend in San Jose (actually Campbell) and am looking for a ride from there to San Ramon on Friday morning for Pacificon.

I won't need a ride back in the evening since we're headed out of town (camping) for the weekend.

Please reply off-list if you can help me out or know someone who can.

Thanks!
-john W4PAH
Chapel Hill, NC

1783. Re: [AT_Sprint] Hot Air Tools Work

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-08 21:25:51 UTC
From: Fred Maas
Topic: 1776 Message: 1783
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

1784. NAQCC October Sprint

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-09 01:42:25 UTC
From: Larry Makoski
Topic: 1784 Message: 1784

This Tuesday evening, the North American QRP CW Club will be holding its monthly sprint.

Here are the particulars:

Date and time:
Wednesday October 10th, 0030-0230 UTC
(Remember that's Tuesday evening here in the USA) That's 8:30 - 10:30 EDT, 7:30 - 9:30 CDT, 6:30 - 8:30 MDT and 5:30 - 7:30 PDT.

Bands - Frequencies:
80M - 3555-3565 kHz (Be courteous to FISTS operating on 3558 kHz)
40M - 7039-7050 kHz (Avoid W1AW on 7047.5 kHz).
20M - 14059-14065 kHz. General:
A particular station may be worked once on each band. Operate CW only. All licensed amateurs are invited to participate, but only those operating QRP (5 watts or less) are eligible for awards.

Call: CQ NA

Exchange:
RST - SPC (State Province or Country) - NAQCC Nr.
(non-Members substitute power level for NAQCC Nr., e.g. 5W, 1W, etc. Be sure to add the W.)

QSO Points:
QSO with a Member, 2 points.
QSO with a Non-member, 1 point.

Multipliers:
Each USA state
Each VE province
Each country except W/VE
All multipliers count only once in the contest.

Bonus:
If you use only a straight key for the entire sprint, multiply your score by 2.
If you use only a bug for the entire sprint, multiply your score by 1.5.
If you key with anything other than a straight key or bug, there is no bonus multiplier.

Categories:
SWA - simple wire antennas - for those using a simple wire antenna per NAQCC definition.
GAIN - gain antennas - for those using other than a simple wire antenna.

Special Award:
Our special award this month goes to the one who has the most QSO's with our special event call N3A/# in their log. We will have N3A/# calls from all 10 call areas active in the sprint. In case of a tie, the SA goes to the one with the highest score. If a 1st or 2nd place certificate winner also qualifies for winning the SA, the SA goes to the next highest scorer. That is because we want as many members as possible to receive one of our certificates. You must indicate in your report if you are applying for the SA, and how many N3A/# QSO's are in your log.

The following are our operators:

1 call area - N3A/1 - N1LU (NH)
2 call area - N3A/2 - KD2MX (NJ)
3 call area - N3A/3 - WY3H (PA)
4 call area - N3A/4 - AA4W (FL)
5 call area - N3A/5 - AE5BH (TX)
6 call area - N3A/6 - K6BBQ (CA)
7 call area - N3A/7 - WY7N (UT)
8 call area - N3A/8 - WB8LZG (MI)
9 call area - N3A/9 - W9ILF (IN)
0 call area - N3A/0 - NO2D (CO)

Prize:
We have TWO prizes this month.

Karl N3IJR has kindly donated a Hendricks DC40 QRP Transceiver kit to be given away in honor of the NAQCC's 3rd Anniversary this month. Club President Tom WY3H has decided it will be awarded to the highest scoring MEMBER who has never previously won a 1st or 2nd place certificate in our sprints nor won any other physical prize. In case you don't remember if you've ever won anything, here <http://www.arm-tek.net/%7Eyoel//winners.txt> is a list of winners. Club officers not eligible. So if you qualify to be a winner, get geared up for a maximum effort this month to win this very nice prize. Tie breaking procedures will be the same as for our regular CD's giveaway below.

Continuing this month we are giving away a set of CD's to one participant according to the following rules:

1. The participant meeting the requirements below and posting the highest score will be the winner of a set of CD's in the following months: July, August, September, October, November, January, February, March, April, and May.
A. Requirements: The participant must be a NAQCC member and can not have won a CD set previously. Previous winners are:
K4BAI (Jul 07)
K1EV (Aug 07)
KI4GLH (Sep 07)
B. If the highest scorer does not meet the requirements, then the CD set winner will be the next highest scorer who does meet the requirements.

REMEMBER: You HAVE to be a NAQCC member to be eligible to win the CDs;
and there's still plenty of time to join before Tuesday night's sprint.
To join the NAQCC, please visit: http://www.arm-tek.net/~yoel//joinup.html

Entry Deadline:
All entries must be RECEIVED before 2400Z on October 16th 2007. So
submit as soon as possible, especially regular mail entries.

NEW! NEW! NEW!
Be sure to use the new NAQCC Sprint Autologger feature! Please visit
http://home.alltel.net/johnshan/sprintlog.html after the Sprint to send
in your entry!

For further information, please visit:
http://www.arm-tek.net/~yoel//sprintrules.html

1785. Finally building my ATS-3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-09 16:19:49 UTC
From: ve3wmb
Topic: 1785 Message: 1785

After much procrastinating I finally started building my ATS-3A last night. I managed to get most of the SMT ICs installed and I can still see today ;-). Fortunately I purchased a magnifying light and a very small tip for my soldering iron. The real challenge was the DDS chip as the leads are nearly microscopic. The toothpick + beeswax trick works great for picking up components.

I have a question .. I haven't been following this list too closely ... were there any last-minute component changes or errata for the 3A? I'll browse the list of postings but before I get too far into the building process I want to make sure that I am aware of any changes made to the 3A before I do something that I will later have to undo.

Thanks

Michael VE3WMB

1786. Working on my 3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-09 16:30:33 UTC
From: john
Topic: 1785 Message: 1786

I never thought I'd think of 0805 parts as "big", but I do now!

Goes pretty fast with a Metcal and a fine tip, lighted magnifier and
cheapie headband magnifier.

Fun stuff...now, back to the bench

John K5MO

1787. Re: [AT_Sprint] Finally building my ATS-3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-09 16:34:38 UTC
From: Gil Stacy
Topic: 1785 Message: 1787
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

1788. Lost my first part...buddy can you spare a....

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-09 17:56:51 UTC
From: john
Topic: 1785 Message: 1788

470 ohm 0603? :-)

Barring that, does anyone know someplace that sells SMT part assortments? I know Dan does, but that's like a 3 week turnaround affair and I was hoping for faster than that.

Many thanks
John K5MO back to the bench

1789. Re: [AT_Sprint] Lost my first part...buddy can you spare a....

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-09 18:13:01 UTC
From: michael taylor
Topic: 1785 Message: 1789

On 10/9/07, john <johnmb@...> wrote:
> 470 ohm 0603? :-)
>
> Barring that, does anyone know someplace that sells SMT part assortments? I
> know Dan does, but that's like a 3 week turnaround affair and I was hoping
> for faster than that.

NightFire Electronic Kits, offer reasonably priced SMT part
collections. <http://vakits.com/>

I'd also check eBay, as I have been buying from Asian sellers for
through-hole 1% metal film resistor collections at a decent price.

-Michael, VE3TIX

1790. Re: Finally building my ATS-3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-10 01:47:20 UTC
From: kd1jv
Topic: 1785 Message: 1790

>
> Yes, there are mods. In the photo section of the clubhouse W1MT shows where
> to cut traces on the back of the board and add parts. Also there is a change
> in an electrolytic cap on the other side of the board.

There are no cut traces mods to the -3A. The 47ufd cap across the 5V regulator should be changed to a 100 ufd, but some of the later kits were sent with one. The only other thing is the 45 degree rotation of the uP rest superviser chip, but that is documented in the instructions.

72, Steve KD1JV

1791. Re: [AT_Sprint] Finally building my ATS-3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-10 01:47:35 UTC
From: Michael Harnage
Topic: 1785 Message: 1791

Changing C54 is the most bang for your buck mod.
Although the last run I believe that Steve had a
bigger cap in the kit so check yours first. It should
be at least 100uF.

Search the messages for "keying thump" and "keying
envelope fix" for others that you may or may not want
to do. I suggest build it stock (except for C54) and
if you notice the artifacts associated with the other
fixes then do them.

-mike/w1mt

http://groups.yahoo.com/group/AT_Sprint/message/300

--- ve3wmb <mbabineau@...> wrote:
>
> I have a question .. I haven't been following this
> list too closely
> ... were there any last-minute component changes or
> errata for the 3A?

_____
Boardwalk for $500? In 2007? Ha! Play Monopoly Here and Now (it's updated for today's
economy) at Yahoo! Games.
http://get.games.yahoo.com/proddesc?gamekey=monopolyherenow

1792. Re: Lost my first part...buddy can you spare a....

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-10 01:49:12 UTC
From: kd1jv
Topic: 1785 Message: 1792

> 470 ohm 0603? :-)
>
You could just ask me to send you one :-)

Steve KD1JV

1793. It's Alive!!!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-10 03:28:47 UTC
From: Jim Fraser
Topic: 1793 Message: 1793

I finally completed all the band modules for the 3B tonight. I temporarily tacked in the phones jack and attached a 9v battery clip. On power up I heard the sweet sound of 'dah-dah-dit-dit-dit' in the head phones and saw the flash of a 7 on the LED (17m module installed).

I will complete the calibration and band module adjustment this weekend. This was the most involved kit I have tackled since the HW-8 many, many moons ago, and boy was it fun!!

In the meantime I will look for a suitable enclosure. The Altoids tin is fine, but I would like something just a bit larger that would also hold the band modules.

Jim K6JF

1794. Re: [AT_Sprint] It's Alive!!!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-10 10:32:23 UTC
From: Michael Harnage
Topic: 1793 Message: 1794

Congrats Jim!

Has anyone else noticed that the plastic case that the
new iPod Nanos' are shipped in, is perfect for the ATS
rigs? Anyone know how to drill holes in that type of
hard plastic without ruining it? They are also deep
enough to hold the extra band modules.

-mike/w1mt

--- Jim Fraser <jimf53@...> wrote:

> I finally completed all the band modules for the 3B
> tonight.
>
> In the meantime I will look for a suitable
> enclosure. The Altoids tin
> is fine, but I would like something just a bit
> larger that would also
> hold the band modules.
>
> Jim K6JF
>

_____
Be a better Heartthrob. Get better relationship answers from someone who knows. Yahoo!
Answers - Check it out.
http://answers.yahoo.com/dir/?link=list&sid=396545433

1795. Re: Finally building my ATS-3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-10 14:18:39 UTC
From: dave
Topic: 1785 Message: 1795

Michael,

Thanks for the timely post on this . . .

I'm also about to begin (belated) assembly of my 3A . . .

Good info to gain - at just the right time . . .

73 de dave
ab9ca

--- In AT_Sprint@yahoogroups.com, "ve3wmb" <mbabineau@...> wrote:
>
> After much procrastinating I finally started building my ATS-3A last
> night. I managed to get most of the SMT ICs installed and I can still
> see today ;-). Fortunately I purchased a magnifying light and a very
> small tip for my soldering iron. The real challenge was the DDS chip
> as the leads are nearly microscopic. The toothpick + beeswax trick
> works great for picking up components.
>
> I have a question .. I haven't been following this list too closely
> ... were there any last-minute component changes or errata for the 3A?
> I'll browse the list of postings but before I get too far into the
> building process I want to make sure that I am aware of any changes
> made to the 3A before I do something that I will later have to undo.
>
> Thanks
>
> Michael VE3WMB
>

1796. Re: [AT_Sprint] Re: Lost my first part...buddy can you spare a....

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-10 14:37:03 UTC
From: Kurt Savegnago
Topic: 1785 Message: 1796

--- kd1jv <kd1jv@...> wrote:

> > 470 ohm 0603? :-)
> >
> You could just ask me to send you one :-)
>
> Steve KD1JV
>
>

You better send him a few extra just in case! :-)

Kurt
K9LDH

Slackware user since 1994

1797. DFE on ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-10 19:47:40 UTC
From: c.gondard
Topic: 1797 Message: 1797

Hello

I have now finished the installation of all components except the 3x2N7000 (these small things are very (very !!) sensitive to ESD, I have some troubles with them on my 2 other ATS3A

I get the 8 on the LED at the first activation and I have performed the calibration procedure for RX described on page 22 of the manual. All seems OK. The DDS is OK ; I can hear a strong signal on RX without the band module, and I can hear the TX signal with another RX nearby. The frequency in TX and RX is changing when I use TUNE UP / TUNE DOWN

I have also tested the menu functions. Most are OK but I have 3 strange things :

1. when DFE is activated (MENU + SPLIT)I can enter a new frequency with the paddle and the LED shows the 4 numbers on the board, but in fact the frequency has not really changed when going back to frequency display; I have noticed that just after the 4th digit an "X" is send

2. I try to determine the firmware version (page 10 of the manual) by holding MENU during power up : no "v", no version given in the sidetone

3. using the keyer : I can not use the 7 dashes to separate several messages in the memory : it seems it is not regognized, but I can enter a long message until the end of the memory. I have try also very low speed with no success

Do I missed something,or is something wrong ?

Thank you for your comments / helps

72 de Chris / F6FTB

1798. ATS-3B working but question on the QBSA

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-10 20:12:56 UTC
From: n2uz
Topic: 1798 Message: 1798

Just had my first contact with my ATS-3B from NJ to AZ, not bad. Just had one bad solder connection at U2 pin 3. I am getting 4.2 watts out using the QBSA for power. I have only built the 30 meter module so far, but the others will soon follow.
To build it I used the normal solder method. I pre tinned one pad, used solder wick on that and then grabbed the part with a toothpick that had a small dab of that blue stuff my wife uses to hold pictures on the walls.
I also built the QBSA and may have a problem. The 100 hz digit is not steady, if it displays a 0 it will jump between 0 and 1. If I tweak the trimmer it will jump between 0 and 9. Never can I get it to be steady. All the adjustment were performed per the manual.

Jerry, N2UZ

1799. Re: [AT_Sprint] Re: Lost my first part...buddy can you spare a....

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-10 23:20:56 UTC
From: john
Topic: 1785 Message: 1799

Not a bad idea. The carpets are fiendish here!

John K5MO

At 10:37 AM 10/10/2007, Kurt Savegnago wrote:
>-
>You better send him a few extra just in case! :-)
>
>

1800. Re: [AT_Sprint] DFE on ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-11 00:04:07 UTC
From: Michael Harnage
Topic: 1797 Message: 1800

As far as the 7 dashes goes, it is NOT 7 individual
dashes but instead hold the dash key down continously
until 7 dashes have occurred. This is a single
character memory marker.

-mike/w1mt

--- "c.gondard" <c.gondard@...> wrote:

>
> 3. using the keyer : I can not use the 7 dashes to
> separate several
> messages in the memory : it seems it is not
> regognized, but I can
> enter a long message until the end of the memory. I
> have try also
> very low speed with no success
>

_____
Be a better Heartthrob. Get better relationship answers from someone who knows. Yahoo!
Answers - Check it out.
http://answers.yahoo.com/dir/?link=list&sid=396545433

1801. Re: [AT_Sprint] ATS-3B working but question on the QBSA

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-11 00:06:20 UTC
From: Michael Harnage
Topic: 1798 Message: 1801

The QBSA's that I have seen all had jumpy 100Hz
digits. Wouldn't worry about it.

-mike/w1mt

--- n2uz <n2uz@...> wrote:

> The
> 100 hz digit is
> not steady, if it displays a 0 it will jump between
> 0 and 1. If I
> tweak the trimmer it will jump between 0 and 9.
> Never can I get it to
> be steady. All the adjustment were performed per
> the manual.
>
> Jerry, N2UZ
>
>
>
>
> Yahoo! Groups Links
>
>
>
>
>

Shape Yahoo! in your own image. Join our Network Research Panel today!
http://surveylink.yahoo.com/gmrs/yahoo_panel_invite.asp?a=7

1802. Re: [AT_Sprint] DFE on ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-11 02:33:42 UTC
From: Michael Harnage
Topic: 1797 Message: 1802

For the DFE, if you enter a freq that is "outside" the normal US ham bands (don't know if Steve changed the firmware for those outside the US) you will hear the "X". Means that you can't enter that freq. You will notice some anomalies with entering frequencies, for example, you can enter 999.9 which will put you at 7.9999 mhz (with the 40m module) but you can't "step up" to 7.999. Reason is that firmware does not check the Mhz digits of the frequency. For 30m the lower limit is 99.9 Khz and the upper limit is 150.0 Khz. So if you enter anything less than 99.9 or greater than 150.0 Khz you should get the "X".

My rig does not give me the firmware version either. Reason is that the test for straight key mode is causing the firmware to skip testing for the menu button. If you hold the dash paddle and the menu button then apply power you will hear the "V1" but then you will be in straight key mode. Simply repower.

-mike/w1mt

--- "c.gondard" <c.gondard@...> wrote:

>
> 1. when DFE is activated (MENU + SPLIT)I can enter a
> new frequency
> with the paddle and the LED shows the 4 numbers on
> the board, but in
> fact the frequency has not really changed when going
> back to
> frequency display; I have noticed that just after
> the 4th digit
> an "X" is send
>
> 2. I try to determine the firmware version (page 10
> of the manual) by
> holding MENU during power up : no "v", no version
> given in the
> sidetone
>

Need a vacation? Get great deals
to amazing places on Yahoo! Travel.
http://travel.yahoo.com/

1803. Re: Lost my first part...buddy can you spare a....

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-11 17:37:25 UTC
From: kd1jv
Topic: 1785 Message: 1803

John,

It would help if you sent me your address in a private email so I can send you the lost resistor. Otherwise, I'll have to look through 160 evelopes trying to fing it!

Steve, KD1JV

1804. 47Z7 MOV in place of 1N4756 47V zener diode?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-11 18:17:49 UTC
From: rds_6
Topic: 1804 Message: 1804

While waiting for the 1N4756 47-volt zener diode to arrive, I remembered I had some 47Z7 47-volt metal-oxide varistors (MOVs). I'm wondering what would happen if I installed one in place of the missing zener. I'm thinking the important parameters are trigger voltage, power dissipation, switching speed, and capacitance. The trigger voltage should be the same, and the power dissipation should be greater (although MOV specs are for transients, so it's hard to compare), so those shouldn't be a problem. I seem to recall MOVs switching slower than zeners, so I don't know if they'd be appropriate for RF. My main concern is that the 4500 pF capacitance rating of the 47Z7 places a 10-ohm @ 3.5 MHz and 1.7-ohm @ 21 MHz capacitive reactance to ground at the output of the PA, which seems like it would not only rob power from the antenna and mess up the PA output impedance but also be low enough to nearly short out the PA output, so it seems like a MOV with 4500 pF capacitance is unsuitable. Is that a reasonable conclusion, or is there a way I could make it work?

Also, when testing my ATS3B R2, I noticed the "Checkout and Calibration" instructions on page 23 of the ATS3B R2 manual refer to the PA transistors as "Q6 to Q8" and the PA keying transistor as "Q4." Shouldn't these be "Q7 to Q9" and "Q6," respectively?

During checkout, I also tried out some of the various functions. A couple of things didn't work as I expected. The LED decimal point lit for RIT, but not for XIT (even though subsequently pressing the SPLIT button emitted the "dit" indicating XIT was being turned off, so it must have actually been turned on, even with the unilluminated decimal point). Also, tuning up in frequency over the 80m band gave the "dit" soft and "dit-dit" hard band limits, but tuning down just kept periodically repeating the "dit" soft band limit, never reaching a "dit-dit" hard band limit. I didn't hook up a frequency counter to see where the DDS actually was in frequency. Are these normal (i.e., firmware "features") or is there something I should do to fix them?
72,
Ross N0GSZ

1805. Sidetone on start-up

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-11 18:34:39 UTC
From: la3rk
Topic: 1805 Message: 1805

Just finished the ATS-3B. Displays 8 as stated. However there is a permanent sidetone in the phones before and after the dah-dah-dit-dit-dit.

No paddle or keyer connected.

Any suggestions on how to find the error?

LA3RK
Olaf Devik

1806. Re: Lost my first part...buddy can you spare a....

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-11 18:50:40 UTC
From: Buddy Brown
Topic: 1785 Message: 1806

I have bare concrete here and still lose them.

Buddy - N5BUD

Not a bad idea. The carpets are fiendish here!

John K5MO

At 10:37 AM 10/10/2007, Kurt Savegnago wrote:
>-
>You better send him a few extra just in case! :-)
>
>

1807. Re: DFE on ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-11 19:04:31 UTC
From: c.gondard
Topic: 1797 Message: 1807

Hello Mike

Tnx for comments

I have now tested all band modules and made alignment with RF signal
All is OK
I can use DFE on all band modules except the 80m module !!
but DDS is moving with TUNE UP/TUNE DOWN on 80m
strange !!
72 de Chris / F6FTB

--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:
>
> For the DFE, if you enter a freq that is "outside" the
> normal US ham bands (don't know if Steve changed the
> firmware for those outside the US) you will hear the
> "X". Means that you can't enter that freq. You will
> notice some anomalies with entering frequencies, for
> example, you can enter 999.9 which will put you at
> 7.9999 mhz (with the 40m module) but you can't "step
> up" to 7.999. Reason is that firmware does not check
> the Mhz digits of the frequency. For 30m the lower
> limit is 99.9 Khz and the upper limit is 150.0 Khz. So
> if you enter anything less than 99.9 or greater than
> 150.0 Khz you should get the "X".
>
> My rig does not give me the firmware version either.
> Reason is that the test for straight key mode is
> causing the firmware to skip testing for the menu
> button. If you hold the dash paddle and the menu
> button then apply power you will hear the "V1" but
> then you will be in straight key mode. Simply repower.
>
>
> -mike/w1mt
>
>

1808. Re: [AT_Sprint] Re: Lost my first part...buddy can you spare a....

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-11 20:11:44 UTC
From: Marc G0AZS
Topic: 1785 Message: 1808
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

1809. Re: [AT_Sprint] 47Z7 MOV in place of 1N4756 47V zener diode?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-11 22:35:35 UTC
From: Steven Weber
Topic: 1804 Message: 1809

>While waiting for the 1N4756 47-volt zener diode to arrive,

It should show up in a day or two, everyone who needs one should have it soon. Zener for DX kits went out today.

>remembered I had some 47Z7 47-volt metal-oxide varistors (MOVs). I'm
>wondering what would happen if I installed one in place of the missing
>zener.

I doubt you'd get any RF output because of the high capacitance and it would likely cause the overcurrent detector to trip. Better to not use anything there than something which is not suitable.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

1810. Re: [AT_Sprint] Re: DFE on ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-12 01:10:21 UTC
From: Michael Harnage
Topic: 1797 Message: 1810

Chris and all

80m dfe does not work because the test for the
firmware is testing 0x9999 (999.9 Khz) against what
ever you put in. The first test is to see is what you
put in is greater than or equal to 0x9999. It is since
0x9999 is a negative number (1001100110011001)
virtually any "cw freq" you enter will fail and kick
you out.

This is one of the reasons that my version of the
firmware does not have limit checks. The freq is
stored and manipulate as a decimal but the cmp is
using signed integer comparisons. Not gonna be trivial
to get it to work right and I wanted the program space
on the other ATS rigs for other things. I am currently
working on porting my version of the ATS firmware to
the 3B.

I am sure that Steve is tracking these little bugs and
will be releasing updated firmware soon. If you have
not checked out how to reprogram the rig it may be
worth reading up on it...

[shameless plug mode on]
check it out at <http://w1mt.qrpradio.com/ats3.html>
[shameless plug mode off]

-mike/w1mt

--- "c.gondard" <c.gondard@...> wrote:
>
> I have now tested all band modules and made
> alignment with RF signal
> All is OK
> I can use DFE on all band modules except the 80m
> module !!
> but DDS is moving with TUNE UP/TUNE DOWN on 80m
> strange !!
> 72 de Chris / F6FTB
>

_____
Looking for a deal? Find great prices on flights and hotels with Yahoo! FareChase.
http://farechase.yahoo.com/

1811. Re: winding for balun core of QBSA

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-12 10:49:41 UTC
From: Jim Fraser
Topic: 1693 Message: 1811

Thanks guys for posting the photo of of the balun and the confirmation of it being correctly wound. I was previewing the QBSA manual and found the drawing to be a little confusing with the start and finish ends of the bottom winding. I will be ordering one these kits shortly to complement by 3B.

73
Jim K6JF

1812. Re: DFE on ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-12 18:43:07 UTC
From: c.gondard
Topic: 1797 Message: 1812

Hello Mike

Thanks a lot for this explanation; I understand that it is a small bug in the software. So I will wait a little to see if any upgrade in the szoftware is available. I am a completely beginner in EPROM programation, but I will learn (that is also ham radio !)

Now I get 4.5 watts on 80m with 3 x 2N7000 on 11 volts; As described in the manual it is not possible to use more than 12.5 V, as the overdrive circuit trips !!

I try the 30 module but I need to compress/expand coils in order to get maximum power.

What a pleasure to buid this kit !!

Again congratulations to Steve (and other) for this nice job

72 de

Chris / F6FTB

--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:
>
> Chris and all
>
> 80m dfe does not work because the test for the
> firmware is testing 0x9999 (999.9 Khz) against what
> ever you put in. The first test is to see is what you
> put in is greater than or equal to 0x9999. It is since
> 0x9999 is a negative number (1001100110011001)
> virtually any "cw freq" you enter will fail and kick
> you out.
>
>

1813. QBSA and 3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-12 20:59:37 UTC
From: john
Topic: 1693 Message: 1813

I am kind of confused by the postings, on the use of teh QBSA and the 3B?
Are they compatible (in a frequency display standpoint?)

73
John

1814. Re: QBSA and 3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-12 22:14:35 UTC
From: Jim Fraser
Topic: 1693 Message: 1814

John,

Read the thread beginning with:
http://groups.yahoo.com/group/AT_Sprint/message/1508

It would appear by Steve's comments that it should be OK with the 3B.
If sensitivity at the higher frequencies becomes an issue, Steve
mentions a solution...physically switching the positions of L1 and
R18 on the board so that they match what is on the schematic.

Jim K6JF

--- In AT_Sprint@yahoogroups.com, john <johnmb@...> wrote:
>
> I am kind of confused by the postings, on the use of teh QBSA and
the 3B?
> Are they compatible (in a frequency display standpoint?)
>
> 73
> John
>

1815. Missing part for ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-13 09:47:25 UTC
From: sm0gns
Topic: 1815 Message: 1815

Hi.

I have been sending some private mail to Steve/KD1JV during the last
10 days without any answers. Perhaps my mail is circulating i
cyberspace?

Now I will try to get it through this way.

I am missing a vital part in my ATS3B kit.
It is U4, 74LVC1G3157 that is missing.

Could you please send me one replacement?

Best regards

Peder, SM0GNS

1816. Re: Sidetone on start-up

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-13 13:35:20 UTC
From: la3rk
Topic: 1805 Message: 1816

--- In AT_Sprint@yahoogroups.com, "la3rk" <la3rk@...> wrote:
>
> Just finished the ATS-3B. Displays 8 as stated. However there is a
> permanent sidetone in the phones before and after the dah-dah-dit-
dit-
> dit.
>
> No paddle or keyer connected.
>
> Any suggestions on how to find the error?
>
> LA3RK
> Olaf Devik
>
Took some detailed inspection with scope etc but problem solved.

Error traced, bad soldering on R12 and R13 which meant that input to
first audio amp was wrong and it went into oscillation. This for
info with anybody else seeing the same problem.

Signals are getting through from antenna to headphones.

LA3RK

1817. Re: [AT_Sprint] Re: Sidetone on start-up

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-13 13:42:49 UTC
From: k4bev@aol.com
Topic: 1805 Message: 1817

In a message dated 10/13/2007 8:35:33 AM Central Daylight Time,
la3rk@... writes:
Error traced, bad soldering...

Olaf,
Which method did you use to solder your 3B?

73, Don - K4BEV

********** See what's new at http://www.aol.com

1818. Re: [AT_Sprint] Missing part for ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-14 00:55:09 UTC
From: Steven Weber
Topic: 1815 Message: 1818

>I have been sending some private mail to Steve/KD1JV during the last
>10 days without any answers. Perhaps my mail is circulating i
>cyberspace?

Must be, best I can tell, I never got the original message(s)

>I am missing a vital part in my ATS3B kit.
>It is U4, 74LVC1G3157 that is missing.
>
>Could you please send me one replacement?

Be in the mail Monday.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

1819. Re: Missing part for ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-14 11:34:39 UTC
From: sm0gns
Topic: 1815 Message: 1819

Morning.

I appreciate that Steve.

The ATS3B is now complete (except U4) and all holes is drilled in the box. I am not using Altoids this time, instead I will use an Fisherman's Friend that have the same size, but different logo...

72
Peder, SM0GNS

> >I am missing a vital part in my ATS3B kit.
> >It is U4, 74LVC1G3157 that is missing.
> >
> >Could you please send me one replacement?
>
> Be in the mail Monday.
> 72,
> Steve, KD1JV

1820. Re: [AT_Sprint] Re: QBSA and 3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-14 14:21:08 UTC
From: john
Topic: 1693 Message: 1820

Hi Jim,

Thanks for the pointer AND the resistors....I'm back on track. Just finishing up with the last of the semis....

Did you get yours completed yet?

73 and thanks again
John

At 06:14 PM 10/12/2007, you wrote:
>John,
>
>Read the thread beginning with:
>http://groups.yahoo.com/group/AT_Sprint/message/1508
>
>It would appear by Steve's comments that it should be OK with the 3B.
>If sensitivity at the higher frequencies becomes an issue, Steve
>mentions a solution...physically switching the positions of L1 and
>R18 on the board so that they match what is on the schematic.
>
>Jim K6JF
>
>
>--- In AT_Sprint@yahoogroups.com, john <johnmb@...> wrote:
> >
> > I am kind of confused by the postings, on the use of teh QBSA and
>the 3B?
> > Are they compatible (in a frequency display standpoint?)
> >
> > 73
> > John
> >
>
>
>
>
>Yahoo! Groups Links
>
>
>

1821. Call for Winter QRP Foxes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-15 00:55:12 UTC
From: Larry Makoski
Topic: 1821 Message: 1821

So far we have only a small number of folks who have volunteered to be foxes for the upcoming winter foxhunts which start on Tuesday, Oct. 30th.......Yes that's only about 2 weeks away.

If you participate in the foxhunts PLEASE consider applying to be a fox ASAP via.........

For 40 meters....... http://www.qrpfoxhunt.org/fap40.htm

For 80 meters...... http://www.qrpfoxhunt.org/fap80.htm

And, I know, we call it an application process. Don't let it scare you. Its just our simplified way for you to provide some information and for those of us preparing the schedule to know about your desire to participate.

So..........how about it? Let's get the winter foxhunt season off to a good start.......PLEASE APPLY TODAY.

72
Jerry N9AW

1822. ATS-3B; U11 Marking Question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-15 05:21:43 UTC
From: mikee30h
Topic: 1822 Message: 1822

I'm probably "overanalyzing" it, but can someone confirm that the U11 I have is ok to use. It is marked as "SLPW" rather than "SLFJ" per the instructions. I did confirm that the "P" on mine is not an"F". I didn't see any mention of the one I have on any of the discussion. Ok to use "SLPW"? Thanks.

1823. Re: [AT_Sprint] ATS-3B; U11 Marking Question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-15 14:25:42 UTC
From: Steven Weber
Topic: 1822 Message: 1823

>I'm probably "overanalyzing" it, but can someone confirm that the U11
>I have is ok to use. It is marked as "SLPW" rather than "SLFJ" per the
>instructions. I did confirm that the "P" on mine is not an"F". I
>didn't see any mention of the one I have on any of the discussion. Ok
>to use "SLPW"? Thanks.
>

Apparently, the last two letters are a date or lot code, so are different
than the first batch of these parts I bought (for the ATS-3A rigs). Not
thinking there would be different markings on the new batch, I used the
code from that first batch in the manual. In anyevent, that is the correct
part.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

1824. Smoke test

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-15 21:21:21 UTC
From: john
Topic: 1693 Message: 1824

My ATS3B fired up with a hearty "8" out of the headphones. Do I understand correctly that it happens only the first time power is applied?

Happy days!

John K5MO

1825. Answered my own question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-15 21:37:37 UTC
From: john
Topic: 1693 Message: 1825

There's an "8" when the power stays down long enough, and is then re-started.

Now...off to wind a zillion toroids! 8-)

At 05:21 PM 10/15/2007, you wrote:
>My ATS3B fired up with a hearty "8" out of the headphones. Do I understand
>correctly that it happens only the first time power is applied?

1826. Re: QBSA and 3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-15 21:55:00 UTC
From: Jim Fraser
Topic: 1693 Message: 1826

Hi John,

I see in another message that you got your 3B to sing on power up,
congrats!. Have fun with those toroids! I only wound enough to
complete one band module per evening, thus it took six days.

I am still looking around for an enclosure, I'd would like something
a bit larger than the Altoids tin to include the band modules. Today
I ordered a QBSA today to help with the band module power adjustments.

Jim

--- In AT_Sprint@yahoogroups.com, john <johnmb@...> wrote:
>
> Hi Jim,
>
> Thanks for the pointer AND the resistors....I'm back on track. Just
> finishing up with the last of the semis....
>
> Did you get yours completed yet?
>
> 73 and thanks again
> John
>
>
>
> At 06:14 PM 10/12/2007, you wrote:
> >John,
> >
> >Read the thread beginning with:
> >http://groups.yahoo.com/group/AT_Sprint/message/1508
> >
> >It would appear by Steve's comments that it should be OK with the
3B.
> >If sensitivity at the higher frequencies becomes an issue, Steve
> >mentions a solution...physically switching the positions of L1 and
> >R18 on the board so that they match what is on the schematic.
> >
> >Jim K6JF
> >
> >
> >--- In AT_Sprint@yahoogroups.com, john <johnmb@> wrote:
> > >
> > > I am kind of confused by the postings, on the use of teh QBSA
and
> >the 3B?

> > > Are they compatible (in a frequency display standpoint?)
> > >
> > > 73
> > > John
> > >
> >
> >
> >
> >
> >
> >Yahoo! Groups Links
> >
> >
> >
>

1827. Re: [AT_Sprint] Re: QBSA and 3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-15 22:09:03 UTC
From: john
Topic: 1693 Message: 1827

Hi Jim,

Yes, at least it passed the smoke test... I'll go through the rest of the checks this evening and tomorrow, and start winding toroids.

I too would be interested in an enclosure large enough for the unused band modules, as well as the rig. Would be interesting to see if anyone else has gone down this road before, to provide some food for thought...

John K5MO

PS : Thanks again for the resistor!

At 05:55 PM 10/15/2007, you wrote:
>Hi John,
>
>I see in another message that you got your 3B to sing on power up,
>congrats!. Have fun with those toroids! I only wound enough to
>complete one band module per evening, thus it took six days.
>
>I am still looking around for an enclosure, I'd would like something
>a bit larger than the Altoids tin to include the band modules. Today
>I ordered a QBSA today to help with the band module power adjustments.
>
>Jim
>
>--- In AT_Sprint@yahoogroups.com, john <johnmb@...> wrote:
> >
> > Hi Jim,
> >
> > Thanks for the pointer AND the resistors....I'm back on track. Just
> > finishing up with the last of the semis....
> >
> > Did you get yours completed yet?
> >
> > 73 and thanks again
> > John
> >
> >
> >
> > At 06:14 PM 10/12/2007, you wrote:
> > >John,
> > >
> > >Read the thread beginning with:
> > >http://groups.yahoo.com/group/AT_Sprint/message/1508
> > >

> > >It would appear by Steve's comments that it should be OK with the
>3B.
> > >If sensitivity at the higher frequencies becomes an issue, Steve
> > >mentions a solution...physically switching the positions of L1 and
> > >R18 on the board so that they match what is on the schematic.
> > >
> > >Jim K6JF
> > >
> > >
> > >--- In AT_Sprint@yahoogroups.com, john <johnmb@> wrote:
> > > >
> > > > I am kind of confused by the postings, on the use of teh QBSA
>and
> > >the 3B?
> > > > Are they compatible (in a frequency display standpoint?)
> > > >
> > > > 73
> > > > John
> > > >
> > >
> > >
> > >
> > >
> > >
> > >Yahoo! Groups Links
> > >
> > >
> > >
> > >
>
>
>
>
>
>Yahoo! Groups Links
>
>
>

1828. (slightly)OT: ATS3B first outing antenna considerations [help needed]

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-16 06:07:09 UTC
From: kc7fys
Topic: 1828 Message: 1828

Howdy,
I took my 3B down to a somewhat scenic and blustery part of Tokyo bay for an initial outing, what with the XYL being out of town and all. I was able to make some reasonable contacts around JA6, JA2, and right here in JA1 with good reports. Elecraft T1 and BLT went head-to-head and both came out looking good. 'Specially my minty lime-green BLT. I'm afraid of the high SWRs presented to the ATS rig during the T1s tuning routine. (Any comments?)
Anyhoo, I need some antenna application advice. Setting up a wire antenna on a sea-wall. Radial considerations, dimensions, grounding(?) considerations, etc. If you are hip to the flickr.com thing, click on in to some photos of the setup and leave your comments.
<http://farm3.static.flickr.com/2282/1574068849_5703cd90d2_b.jpg>
Don't be afraid of getting too basic with me. Here's the URL, and I'll take the rest of this discussion off-list, which seems appropriate.
Thanks again for the fun rig, Steve.
Jonathan 7J1AWL/KC7FYS

1829. Better URL

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-16 06:09:02 UTC
From: kc7fys
Topic: 1829 Message: 1829

Sorry, that URL will just take you to a photo. There's a lot more to
see and do.
<http://www.flickr.com/photos/jonathancharles/1574068849/in/set-72157602441401209/>
Jonathan

1830. Re: [AT_Sprint] (slightly)OT: ATS3B first outing antenna considerations [help needed]

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-16 10:52:44 UTC
From: Gil Stacy
Topic: 1828 Message: 1830
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

1831. Re: [AT_Sprint] (slightly)OT: ATS3B first outing antenna considerations [help needed]

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-16 13:32:05 UTC
From: Ted W2TAG
Topic: 1828 Message: 1831

Hi Jonathan and group,

Here's a link to the best portable antenna (no ground or feedline reqd.)
I've found. It works great with my 3A and should work great with my 3B when
I get it done :-)

http://www.njqrp.org/n2cxantennas/halfer/halfer.html

Ted, W2TAG

kc7fys wrote

> Howdy,
> I took my 3B down to a somewhat scenic and blustery part of Tokyo bay
> for an initial outing, what with the XYL being out of town and all. I
> was able to make some reasonable contacts around JA6, JA2, and right
> here in JA1 with good reports. Elecraft T1 and BLT went head-to-head
> and both came out looking good. 'Specially my minty lime-green BLT.
> I'm afraid of the high SWRs presented to the ATS rig during the T1s
> tuning routine. (Any comments?)
> Anyhoo, I need some antenna application advice. Setting up a wire
> antenna on a sea-wall. Radial considerations, dimensions, grounding(?)
> considerations, etc. If you are hip to the flickr.com thing, click on
> in to some photos of the setup and leave your comments.
> <http://farm3.static.flickr.com/2282/1574068849_5703cd90d2_b.jpg>
> Don't be afraid of getting too basic with me. Here's the URL, and I'll
> take the rest of this discussion off-list, which seems appropriate.
> Thanks again for the fun rig, Steve.
> Jonathan 7J1AWL/KC7FYS

1832. ATS3B TO ATS3B QSO IN EUROPE

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-16 20:54:39 UTC
From: c.gondard
Topic: 1832 Message: 1832

Hello

My new ATS3B is now installed in a small pills box (made in France), very similar to the famous ALTOIDS box , which is difficult to find in EU !! I will post soon some pictures on my small web page (see qrz.com) and here

Before doing that, I made about 50 qso on the 6 bands with some good DX on 17m and 15m (PZ5RA on 17m, several W/VE on 15m last Sunday) Antenna here is only a 2X20 m doublet with a 450 parallel line, a 1/1 balun (BL1 from Elecraft) and the T1 Elecraft ATU. I have notived that the overcurrent sensing system trips easely when power supply is at 12 volts, so I put 2 x 1N4007 diodes in serie in the power suplly line to reduce voltage to 11 volts. OUtput power is about 4.5 watts on 80m, and drops to 3.5 on 15m which must be in the spec.

Again very pleased to built this excellent kit : congratulations to Steve for this wonderfull job !

I just finished a long QSO on 80m with Paul HB9AXL also using his new ATS3B !! It must be a first QSO of this type in EU !!

72 de

Chris / F6FTB

1833. No DDS output

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-17 00:22:31 UTC
From: twoube
Topic: 1833 Message: 1833

I'm trying to do the calibration process on p. 22 of the manual, and I can't seem to get anything out of the DDS (at test point 1). The unit does enter the cal routine (I get the CW feedback and the "C" on the display) but if "DDS TP1" is the same as "TP1", I am not getting any signal at that point. I connected a counter, then checked also with my trusty Tek 485. I do measure 4VDC at that location , as noted earlier in the checkout procedure

I can slew the frequency with the up/down buttons and have it "announced" via the Menu button (I think that's it...)

1834. Re: [AT_Sprint] No DDS output

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-17 00:37:09 UTC
From: Michael Harnage
Topic: 1833 Message: 1834

Start with this: Look at the DDS chip under
magnification to ensure good solder joints. Also,
inspect the 60MHz oscillator and make sure it is
soldered good and is working.

-mike/w1mt

--- twoube <johnmb@...> wrote:

> I'm trying to do the calibration process on p. 22 of
> the manual, and I
> can't seem to get anything out of the DDS (at test
> point 1). The unit
> does enter the cal routine (I get the CW feedback
> and the "C" on the
> display) but if "DDS TP1" is the same as "TP1", I am
> not getting any
> signal at that point. I connected a counter, then
> checked also with my
> trusty Tek 485. I do measure 4VDC at that location
> , as noted earlier
> in the checkout procedure
>
> I can slew the frequency with the up/down buttons
> and have it
> "announced" via the Menu button (I think that's
> it...)
>
>

_____
Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

1835. Re: [AT_Sprint] No DDS output

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-17 03:12:22 UTC
From: Steven Weber
Topic: 1833 Message: 1835

Not having a connection to one or more of the clock osc pins is the most common reason for no DDS output. Second is connections at the DDS chip and third is missing/bad connections to the discretes connected to the DDS. Got to be one of those three!

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

1836. QBSA frequency display with ATS-3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-17 15:21:53 UTC
From: n2uz
Topic: 1836 Message: 1836

I have been using my ATS-3B and QBSA for 2 weeks now with the 30 meter module and all is ok. This week I built and checked the 40,20,17 and 15 modules and get good power out on them.
The only thing is that on 17 meters the QBSA is jumping around 5 kc and with the 15 meter module the QBSA just displays the IF freq of 4.9152. The other bands display correctly.

I saw the thread about changing L1 and R18 to match the schematic, but on my QBSA board they are in the correct position. R18 is connected to the collector of Q2 and L1, and the other side of L1 goes to 5 volts.
On my scope it looks like a very small signal coming from the ATS-3B(I take it off DDS LO output via the 3 pf cap supplied.
Any ideas , should I try pin 20 of U7?

Jerry, Nj2UZ

1837. PocketDigi

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-17 17:43:01 UTC
From: Jim Fraser
Topic: 1837 Message: 1837

Wow, PocketDigi (the PC version) really works. I used it to monitor PSK31 signals off the big rig last night on 40m. So, I made a list of parts for the ATS-3B interface to pickup this weekend and ordered the TS-952 OP Amp from Mouser. I look forward to trying out the interface with my 3B and PC!

Jim K6JF

1838. RIT on 80m with ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-17 21:03:30 UTC
From: c.gondard
Topic: 1838 Message: 1838

Hello

During one of my QSo on 80 this evening, I have noticed a strange behaviour of the RIT function on 80 m :
RIT is ON when pressing SPLIT : a small dot lights on the LED : OK
when using TUNE UP or TUNE DWN, the frequency can move only above or under the central frequency; when you try to cross it again in the opposite way, an "X" appears on morse, and the frequency move is blocked

I try on all other bands, and the RIT is OK : a "0" appears when back to the central frequency, and I can move over or under it several time in both directions

I believe that it is related to the DFE problem on 80m (see message of Mike W1MT

I have posted also a picture of my new ATS3B on the Files Directory

72 to all

Chris / F6FTB

1839. Success

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-17 21:30:18 UTC
From: john
Topic: 1838 Message: 1839

Found my error...a bad joint (imagine that, eh Steve? :-)) on the DDS chip. Alignment progresses well!

Thanks for a great kit!
John K5MO

1840. Re: [AT_Sprint] RIT on 80m with ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-17 22:07:49 UTC
From: Michael Harnage
Topic: 1838 Message: 1840

Chris,

I was thinking about the DFE problem on the way home
from work today and realized that my explanation was
wrong but the result was the same.

Real reason: The lower limit for 80m is 999.9Khz when
a freq is entered it will always be lower than
999.9Khz and thus will fail the lower limit test every
time. The firmware only checks the KHz and tenths of
KHz digits of the frequency.

-mike/w1mt

--- "c.gondard" <c.gondard@...> wrote:

>
> During one of my QSo on 80 this evening, I have
> noticed a strange
> behaviour of the RIT function on 80 m :
> RIT is ON when pressing SPLIT : a small dot lights
> on the LED : OK
> when using TUNE UP or TUNE DWN, the frequency can
> move only above or
> under the central frequency; when you try to cross
> it again in the
> opposite way, an "X" appears on morse, and the
> frequency move is blocked
>
> I try on all other bands, and the RIT is OK : a "0"
> appears when back
> to the central frequency, and I can move over or
> under it several time
> in both directions
>
> I believe that it is related to the DFE problem on
> 80m (see message of
> Mike W1MT
>

Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

1841. ATS-3B transmitting power test without Zener diode possible?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-17 22:14:27 UTC
From: Klaus
Topic: 1841 Message: 1841

Built the ATS-3B with the 20m module and successfully passed all tests except the final transmitting test, because I'm still waiting for the zener (the 1N4736 was inside the kit).Is it possible to do the transmitting test only at the dummy load without soldering in the zener?

72
Klaus, DL1BJA

1842. Re: [AT_Sprint] RIT on 80m with ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-17 22:27:27 UTC
From: w9ya@qrparci.net
Topic: 1838 Message: 1842

Hey gang;

All of these 'operational' software bugs brings up a question.

I imagine a new software release may be desirable in my future. My new laptop ONLY has USB, video, audio, ps-2, card slots and 1394 I/O (and no parallel or serial ports)....So is there a decent external converter for use with the ATS-3B's programming pins/(port) ?

Sorry if this has been asked before and MANY tnxs for a reply.

Vy 72;

Bob
w9ya

> Hello
>
> During one of my QSo on 80 this evening, I have noticed a strange
> behaviour of the RIT function on 80 m :
> RIT is ON when pressing SPLIT : a small dot lights on the LED : OK when
> using TUNE UP or TUNE DWN, the frequency can move only above or under
> the central frequency; when you try to cross it again in the opposite
> way, an "X" appears on morse, and the frequency move is blocked
>
> I try on all other bands, and the RIT is OK : a "0" appears when back
> to the central frequency, and I can move over or under it several time
> in both directions
>
> I believe that it is related to the DFE problem on 80m (see message of
> Mike W1MT
>
> I have posted also a picture of my new ATS3B on the Files Directory
>
> 72 to all
>
> Chris / F6FTB

1843. Re: [AT_Sprint] RIT on 80m with ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-18 00:10:11 UTC
From: Michael Harnage
Topic: 1838 Message: 1843

Probably the "best" solution would be the
MSP-FET430U28 USB FET tool. I have not tried it but it
looks like it should work. Down side is that it costs
$149. Olimex has the MSP430-JTAG-Tiny that should work
and it costs $70 plus shipping. Olimex also has the
MSP430-JTAG-ISO but it costs $130 plus shipping. All
these devices are USB.

-mike/w1mt

--- w9ya@... wrote:

> Hey gang;
>
> All of these 'operational' software bugs brings up a
> question.
>
> I imagine a new software release may be desirable in
> my future. My new
> laptop ONLY has USB, video, audio, ps-2, card slots
> and 1394 I/O (and no
> parallel or serial ports)....So is there a decent
> external converter for
> use with the ATS-3B's programming pins/(port) ?
>
> Sorry if this has been asked before and MANY tnxs
> for a reply.
>
> Vy 72;
>
> Bob
> w9ya
>
>
> > Hello
> >
> > During one of my QSo on 80 this evening, I have
> noticed a strange
> > behaviour of the RIT function on 80 m :
> > RIT is ON when pressing SPLIT : a small dot lights
> on the LED : OK when
> > using TUNE UP or TUNE DWN, the frequency can move
> only above or under
> > the central frequency; when you try to cross it
> again in the opposite
> > way, an "X" appears on morse, and the frequency

> move is blocked
> >
> > I try on all other bands, and the RIT is OK : a
> "0" appears when back
> > to the central frequency, and I can move over or
> under it several time
> > in both directions
> >
> > I believe that it is related to the DFE problem on
> 80m (see message of
> > Mike W1MT
> >
> > I have posted also a picture of my new ATS3B on
> the Files Directory
> >
> > 72 to all
> >
> > Chris / F6FTB
>
>
>
>
>
>
> Yahoo! Groups Links
>
>
>
>
>

Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

1844. Re: [AT_Sprint] RIT on 80m with ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-18 01:30:44 UTC
From: w9ya@qrparci.net
Topic: 1838 Message: 1844

K...thanks for the excellent info Mike. It's a good start.

Does anyone know of a generic device as I run Linux ONLY and am looking
for a device that does a GOOD job of translating USB to RS-232 and/or
Centronics parallel interfaces ? I guess this device should also be usable
for other tasks, like GPS interface etc.

I am assuming there is a good rs-232 or parallel programming interface for
the devices used in the ATS-2/3x series. Maybe NOT ?

TIA for the answers.

Vy 72;

Bob
w9ya

> Probably the "best" solution would be the
> MSP-FET430U28 USB FET tool. I have not tried it but it
> looks like it should work. Down side is that it costs
> $149. Olimex has the MSP430-JTAG-Tiny that should work
> and it costs $70 plus shipping. Olimex also has the
> MSP430-JTAG-ISO but it costs $130 plus shipping. All
> these devices are USB.
>
> -mike/w1mt
>
> --- w9ya@... wrote:
>
>> Hey gang;
>>
>> All of these 'operational' software bugs brings up a
>> question.
>>
>> I imagine a new software release may be desirable in
>> my future. My new
>> laptop ONLY has USB, video, audio, ps-2, card slots
>> and 1394 I/O (and no
>> parallel or serial ports)....So is there a decent
>> external converter for
>> use with the ATS-3B's programming pins/(port) ?
>>
>> Sorry if this has been asked before and MANY tnxs
>> for a reply.
>>
>> Vy 72;

>>
>> Bob
>> w9ya
>>
>>
>> > Hello
>> >
>> > During one of my QSo on 80 this evening, I have
>> noticed a strange
>> > behaviour of the RIT function on 80 m :
>> > RIT is ON when pressing SPLIT : a small dot lights
>> on the LED : OK when
>> > using TUNE UP or TUNE DWN, the frequency can move
>> only above or under
>> > the central frequency; when you try to cross it
>> again in the opposite
>> > way, an "X" appears on morse, and the frequency
>> move is blocked
>> >
>> > I try on all other bands, and the RIT is OK : a
>> "0" appears when back
>> > to the central frequency, and I can move over or
>> under it several time
>> > in both directions
>> >
>> > I believe that it is related to the DFE problem on
>> 80m (see message of
>> > Mike W1MT
>> >
>> > I have posted also a picture of my new ATS3B on
>> the Files Directory
>> >
>> > 72 to all
>> >
>> > Chris / F6FTB
>>
>>
>>
>>
>>
>>
>> Yahoo! Groups Links
>>
>>
>>
>>
>>
>
>
> --

> Do You Yahoo!?
> Tired of spam? Yahoo! Mail has the best spam protection around
> http://mail.yahoo.com

Liviu Librescu - ?n veci pomenirea lui.
(May his memory be eternal.)

1845. Re: [AT_Sprint] ATS-3B transmitting power test without Zener diode possible?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-18 02:54:01 UTC
From: Steven Weber
Topic: 1841 Message: 1845

>zener (the 1N4736 was inside the kit).Is it possible to do the
>transmitting test only at the dummy load without soldering in the zener?
>
Yes, no problem.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

1846. Re: [AT_Sprint] RIT on 80m with ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-18 03:11:07 UTC
From: Steven Weber
Topic: 1838 Message: 1846

>RIT is ON when pressing SPLIT : a small dot lights on the LED : OK
>when using TUNE UP or TUNE DWN, the frequency can move only above or
>under the central frequency; when you try to cross it again in the
>opposite way, an "X" appears on morse, and the frequency move is blocked

In theory, that can't possibly happen. A different kind of test is done in the tuning routine than what is used in DFE. My rig works as it should. I can't think of any reason your rig should behave that way. The only Morse characters which can be sent when in RIT or XIT is a dit or ditdit. Can anyone else duplicate the problem?

The only glich I noticed is the DP doesn't come on when you enter XIT mode as it should, but does come on if you tune up and then down past the center frequency, once the "0" flashes.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

1847. Re: PocketDigi

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-18 06:59:06 UTC
From: Jim Fraser
Topic: 1837 Message: 1847

Digital Interface Questions for Steve:

As my plan is to package the digital interface in the same enclosure as the ATS-3B, I have a couple questions:

1. Since the voltage requirement for the digital interface using the OP Amp is 3.5v, would the output of the 3.5v regulator in the ATS-3B be sufficient to also power the interface?

2. Can the audio inputs for the interface be directly wired to the audio phone jack of the 3B?

Jim K6JF

1848. Re: PocketDigi

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-18 07:34:26 UTC
From: Jim Fraser
Topic: 1837 Message: 1848

Doh! Forget question #2, of course I know that the audio input comes from the audio output of the PC or PocketPC! That's what I get for trying to think this late in the evening.

Jim K6JF

--- In AT_Sprint@yahoogroups.com, "Jim Fraser" <jimf53@...> wrote:
>
> Digital Interface Questions for Steve:
>
> As my plan is to package the digital interface in the same enclosure as
> the ATS-3B, I have a couple questions:
>
> 1. Since the voltage requirement for the digital interface using the OP
> Amp is 3.5v, would the output of the 3.5v regulator in the ATS-3B be
> sufficient to also power the interface?
>
> 2. Can the audio inputs for the interface be directly wired to the
> audio phone jack of the 3B?
>
> Jim K6JF
>

1849. Re: PocketDigi

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-18 11:54:43 UTC
From: kc7fys
Topic: 1837 Message: 1849

Jim and others--if you could, please document your interface for the benefit of the group--and myself, who want to see exactly what people are building with my eyeballs.
VY 73,
Jonathan

1850. F6FTB's BEE

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-18 12:00:24 UTC
From: kc7fys
Topic: 1841 Message: 1850

Hey, wow!
Maybe you win the prize in the VanGogh category. Your 3B looks COOL.
Jonathan

1851. Re: [AT_Sprint] Re: PocketDigi

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-18 15:31:08 UTC
From: Steven Weber
Topic: 1837 Message: 1851

>1. Since the voltage requirement for the digital interface using the OP
>Amp is 3.5v, would the output of the 3.5v regulator in the ATS-3B be
>sufficient to also power the interface?
>
Yes you can.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

1852. Re: F6FTB's BEE

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-18 19:18:30 UTC
From: c.gondard
Topic: 1841 Message: 1852

Hello Jonathan

Thank you for your comment; the top of the box is covered with a plastic film; the image is taken from the file given by Steve in the kit package; I have only added some personal data; the plastic shhet is directlu printed on a laser printer, ang glued on the top of the box.

I have no holes drilled in the box in order to take in place the board; I have simply glued the 4 spacers on the inner surface of the box

I have also added some pictures on files directory of this site

72

Chris / F6FTB

>
> Hey, wow!
> Maybe you win the prize in the VanGogh category. Your 3B looks COOL.
> Jonathan
>

1853. SMD/SMT Rework

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-18 19:35:14 UTC
From: Ken Evans
Topic: 1729 Message: 1853

I saw that some members have purchased hot air smt/smd rework stations. I see three brands on ebay - Atten, Hakko and Madell. Is there a significant difference between brands? Looks like a $90.00 to $150.00 purchase.

Ken W4DU

1854. Re: [AT_Sprint] SMD/SMT Rework

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-18 19:45:10 UTC
From: John D'Ausilio
Topic: 1729 Message: 1854
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

1855. Re: SMD/SMT Rework

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-18 20:21:37 UTC
From: Dave
Topic: 1729 Message: 1855

> I see three brands on ebay - Atten, Hakko and Madell. Is there a
> significant difference between brands?

I suspect that Atten and Madell are actually from the same manufacturer and just have different names silk-screened on the front. The Atten 850D I have looks identical to pictures of the Madell 850D on eBay. Hakko is the big-name brand and is likely to cost more but get you higher quality.

Dave

1856. Re: [AT_Sprint] SMD/SMT Rework

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-18 20:29:09 UTC
From: kb2tqx
Topic: 1729 Message: 1856

Ken,

You might want to take a look here: http://www.sra-solder.com.

Dave
KB2TQX

I saw that some members have purchased hot air smt/smd rework stations. I see three brands on ebay - Atten, Hakko and Madell. Is there a significant difference between brands? Looks like a $90.00 to $150.00 purchase.

Ken W4DU

1857. Re: [AT_Sprint] Re: SMD/SMT Rework

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-18 20:51:17 UTC
From: michael taylor
Topic: 1729 Message: 1857

On 10/18/07, Dave <dmertz@...> wrote:
> > I see three brands on ebay - Atten, Hakko and Madell. Is there a
> > significant difference between brands?
>
> Madell 850D on eBay. Hakko is the big-name brand and is likely
> to cost more but get you higher quality.

Yes Hakko is a "brand name", but I would be careful about the assumption that you necessarily get a higher quality. If it does cost more, then perhaps yes, but a lot of brand name tools, for example DeWalt Power Tools for woodworking and construction, also have a "price-point" or as I call them the "throw-away" line that is intended for the home consumer (weekend DIY'er) that buys from big box stores.

I believe Weller has some Weller branded products that are the "throw-away" quality, but other than the tiny premium for the name, is the same quality and durability as the store or no-name brand made in China models.

BTW, I just did a _quick_ search on eBay and I did not see any Hakko brand hot air rework stations for less than ~$450. I'm curious about what the model number is.

-Michael, VE3TIX

1858. Re: SMD/SMT Rework

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-18 20:57:48 UTC
From: Randal
Topic: 1729 Message: 1858

There are a number of "brands" of SMT work stations that are, in
reality, all made by the same people in the same factory in Asia.

I have had good luck dealing with these folks outside of Boston
http://store.sra-solder.com/

They are helpful, can be reached by email or phone (yup they even
answer the phone ... imagine)

For the average Joe Ham some of the inexpensive work stations will do
just fine. I use one that was really expensive and top notch and one
that cost less than 150 bucks. I tend to use the cheap one more often.
72,
Ran
>

1859. Re: [AT_Sprint] RIT on 80m with ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-18 21:08:27 UTC
From: Steven Weber
Topic: 1838 Message: 1859

Chris, your right. RIT does not act right on 80 meters. In fact, you can't even turn on XIT. Maybe thats where the X was coming from, XIT turning on.

Apparetnly, this is only a problem with the early release of the kit, but might affect the first 100. Not sure when I made that problem go away, so its possible that not all of those 100 have the problem. They all have the 80M DFE problem, as I only recently fixed that.

The RIT problem only affects the 80M band, but XIT won't turn on on any band. XIT is something most people don't use too often or at all. If you don't use 80M much, than RIT and DFE not working right on that band isn't too big a deal.

In any event, I'll up load the firmware later tonight which fixes those problems and a few other little bugs, like not being able to access the firmware version number unless your in straight key mode and the overload warm boot reset not restoring all the current perameters.

If anyone wants thier MPU reprogrammed, I'll be happy to do it and pay for return postage. The most resent kits sent out should be fine as they are.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

1860. Re: [AT_Sprint] SMD/SMT Rework

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-18 21:55:28 UTC
From: Lee Mairs (SAG)
Topic: 1729 Message: 1860

Not positive, but from what I researched prior to my own purchase, the
Atten and the Madell are exactly the same.
73 de Lee
KM4YY/8

Ken Evans wrote:
> I saw that some members have purchased hot air smt/smd rework stations.
> I see three brands on ebay - Atten, Hakko and Madell. Is there a
> significant difference between brands? Looks like a $90.00 to $150.00
> purchase.
>
>
>
> Ken W4DU
>
>
>
>

1861. Re: RIT on 80m with ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-18 23:13:54 UTC
From: radio_kx0r
Topic: 1838 Message: 1861

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
>
> Chris, your right. RIT does not act right on 80 meters. In fact,
you can't
> even turn on XIT. Maybe thats where the X was coming from, XIT
turning on.
>
> Apparetnly, this is only a problem with the early release of the
kit, but
> might affect the first 100. Not sure when I made that problem go
away, so
> its possible that not all of those 100 have the problem. They all
have the
> 80M DFE problem, as I only recently fixed that.
>
> The RIT problem only affects the 80M band, but XIT won't turn on on
any
> band. XIT is something most people don't use too often or at all.
If you
> don't use 80M much, than RIT and DFE not working right on that band
isn't
> too big a deal.
>
> In any event, I'll up load the firmware later tonight which fixes
those
> problems and a few other little bugs, like not being able to access
the
> firmware version number unless your in straight key mode and the
overload
> warm boot reset not restoring all the current perameters.
>
> If anyone wants thier MPU reprogrammed, I'll be happy to do it and
pay for
> return postage. The most resent kits sent out should be fine as
they are.
>
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com
>
Steve,

Thanks for this level of support! I haven't assembled my kit yet - can you reprogram easier with the MPU chip by itself, or do you need the entire board assembled? I'm pretty sure my kit is in the first lot of 100.

Thanks

KX0R
Carey Fuller

1862. Re: [AT_Sprint] SMD/SMT Rework

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-18 23:59:56 UTC
From: W2AGN
Topic: 1729 Message: 1862

Ken Evans wrote:
> I saw that some members have purchased hot air smt/smd rework stations.
> I see three brands on ebay - Atten, Hakko and Madell. Is there a
> significant difference between brands? Looks like a $90.00 to $150.00
> purchase.
>
>
>
> Ken W4DU
>
>
>

I got the Madell 850B on Ebay for $99. Works great.

_ _ _ _ _
/ \ / \ / \ / \ / \ John L. Sielke
(W)(2)(A)(G)(N) http://w2agn.net
_/ _/ _/ _/ _/ http://www.blurty.com/users/w2agn
Member screwed by QRP-ARCI! http://w2agn.net/noarci.html

1863. New file uploaded to AT_Sprint

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-19 02:34:02 UTC
From: AT_Sprint@yahoogroups.com
Topic: 154 Message: 1863

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the AT_Sprint
group.

File : /ATS3B V3 frimware.zip
Uploaded by : kd1jv <kd1jv@...>
Description : Bug free? V3 firmware for ATS3B

You can access this file at the URL:
http://groups.yahoo.com/group/AT_Sprint/files/ATS3B%20V3%20frimware.zip

To learn more about file sharing for your group, please visit:
http://help.yahoo.com/help/us/groups/files

Regards,

kd1jv <kd1jv@...>

1864. V3 firmware

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-19 02:44:03 UTC
From: kd1jv
Topic: 1864 Message: 1864

For those of you who can program the mps430, the latest version of the firmware is now in the files section, as a zipped file.

I tried to see if a simple PC interface could be built for programming the MPU in circuit, but it didn't work. Looks like will have to copy TI's programmer, which uses a 74HC244 non-inverting tri-state buffer. I'll copy that circuit and post in the files section also, in case anyone wants to build one. It does require a PC with a parallel port.

For those who haven't soldered in the MPU and would like it reprogrammed, you can send me just the chip. If you just put it in a letter envelope, it mess up the leads. It can be sent in an envelope, but use a piece of cardboard with a hole cut in it to set the chip in, also put it in the static bag. Or use a padded mailer.

72, Steve KD1JV

1865. Re: [AT_Sprint] Re: PocketDigi

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-19 02:45:19 UTC
From: Vojtěch Bubník
Topic: 1837 Message: 1865

> >1. Since the voltage requirement for the digital interface using the OP
> >Amp is 3.5v, would the output of the 3.5v regulator in the ATS-3B be
> >sufficient to also power the interface?
> >
> Yes you can.

If I were you, I would certainly try the simple one resistor one capacitor interface first. If it works, there is no need for the op-amp solution.

73, Vojtech OK1IAK

1866. Re: QBSA frequency display with ATS-3b - SUCCESS

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-19 14:14:48 UTC
From: n2uz
Topic: 1836 Message: 1866

----------SNIP----------
> The only thing is that on 17 meters the QBSA is jumping around 5 kc
> and with the 15 meter module the QBSA just displays the IF freq of
> 4.9152. The other bands display correctly.
> On my scope it looks like a very small signal coming from the ATS-3B(
> I take it off DDS LO output via the 3 pf cap supplied.
> Any ideas , should I try pin 20 of U7?

Success at last
I swapped L1 and R18 and no change(don't bother doing), 17 and 15
meters still bad(jumping). then I measured with my scope the p-p
voltage at the collector of Q2 as follows:::::::
80 700mv
40 1.4v
30 1v
20 680mv
17 600mv
15 590mv
Looks like you need at least 680mv here.

That's when I picked the signal off of pin 20 of U7 instead of the DDS
LO in the ATS-3B, P-p voltage at the collector of Q2 for 15 meters is
now 1.1v with all the others bands about doubling in value.
All is ok now, rock solid display on all bands(except of course the
occasionall flicker of the least signicficant digit.

Jerry, N2UZ

1867. Altoids tin holds five band filter modules

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-19 15:55:09 UTC
From: rds_6
Topic: 1867 Message: 1867

By orienting three band filter modules lengthwise horizontally across the middle of an Altoids tin and one band filter module vertically at each end of the tin, I was able to get all five unused filter modules not only to fit in the tin but also to be individually accessible without disturbing any of the other band filter modules. I epoxied some surplus six-position female connectors to the inside of the tin to hold the modules by their six-pin connectors.

I posted a photo in the group's Photos section at:
http://ph.groups.yahoo.com/group/AT_Sprint/photos/view/5615?b=1

I went with a "retro" 20th-Century visual theme using industrial gray spray paint and rubber-stamped lettering in oil-based ink (oversprayed with clear coat). It's not anywhere near as cute as an MS Paint color drawing on a label, nor is it meant to be. Given the practically zero cost of Altoids tins, I may make up a few other tins that can be interchanged similar to "skins" for MP3 player software, etc. I'm thinking a WWII-era military boatanchor visual theme would be amusing and similarly anachronistic. If I can find some small sans-serif stencils, I might try black stenciled lettering on gray paint for more of an aerospace component look.
72,
Ross N0GSZ

1868. Re: [AT_Sprint] Altoids tin holds five band filter modules

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-19 16:34:54 UTC
From: bgriffin
Topic: 1867 Message: 1868

Ross,

That definitely has the "cool" factor.

Bill, ni5x.

> By orienting three band filter modules lengthwise horizontally across
> the middle of an Altoids tin and one band filter module vertically at
> each end of the tin, I was able to get all five unused filter modules
> not only to fit in the tin but also to be individually accessible
> without disturbing any of the other band filter modules. I epoxied
> some surplus six-position female connectors to the inside of the tin
> to hold the modules by their six-pin connectors.
>
> I posted a photo in the group's Photos section at:
> http://ph.groups.yahoo.com/group/AT_Sprint/photos/view/5615?b=1
> <http://ph.groups.yahoo.com/group/AT_Sprint/photos/view/5615?b=1>
>
> I went with a "retro" 20th-Century visual theme using industrial gray
> spray paint and rubber-stamped lettering in oil-based ink
> (oversprayed with clear coat). It's not anywhere near as cute as an
> MS Paint color drawing on a label, nor is it meant to be. Given the
> practically zero cost of Altoids tins, I may make up a few other tins
> that can be interchanged similar to "skins" for MP3 player software,
> etc. I'm thinking a WWII-era military boatanchor visual theme would
> be amusing and similarly anachronistic. If I can find some small
> sans-serif stencils, I might try black stenciled lettering on gray
> paint for more of an aerospace component look.
> 72,
> Ross N0GSZ
>
>
>
>---
>
>No virus found in this incoming message.
>Checked by AVG Free Edition.
>Version: 7.5.488 / Virus Database: 269.15.1/1079 - Release Date: 10/19/07 5:10 AM
>
>

1869. Simple programmer interface

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-19 21:08:42 UTC
From: Steven Weber
Topic: 1838 Message: 1869

Turns out the schematic for the TI programmer had the pin out to the DB-25 connector all wrong. I buzzed out the connections on my programmer and low and behold, the simple resistor only interface works!

All you need is a male DB-25 connector for the parallel port, a 7 pin SIP pin to plug into the ATS board, 5, 22K resistors and 1, 220 ohm resistor.

We'll number the pins on the ATS board left to right as 1 to 7, ground being pin 1.

ATS pin >> resistor >> DB25 pin
1 none 18 to 25 (all grounds connected together)
2 22K 16
3 22K 1
4 22K 4
5 22K 3
6 22K 2
7 220 ohm 12

The resistors do a voltage translation from the 4-5 volt output of the parallel port to the 3.5 volt supply of the MPU. The resistor values aren't very critical, a size up or down from those shown should work okay.

For instructions on doing the programming, see W1MT's web page <http://w1mt.qrpradio.com> You'll need a XP machine with a parallel port to run the IAR software and use the programmer interface.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

1870. Re: [AT_Sprint] Simple programmer interface

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-19 22:10:40 UTC
From: Bill Noyce
Topic: 1838 Message: 1870
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

1871. Re: [AT_Sprint] Simple programmer interface

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-19 21:21:28 UTC
From: w9ya@qrparci.net
Topic: 1838 Message: 1871

This is great info Steve. Thanxs.

Vy 72;

Bob
w9ya

> Turns out the schematic for the TI programmer had the pin out to the
> DB-25 connector all wrong. I buzzed out the connections on my programmer
> and low and behold, the simple resistor only interface works!
>
> All you need is a male DB-25 connector for the parallel port, a 7 pin
> SIP pin to plug into the ATS board, 5, 22K resistors and 1, 220 ohm
> resistor.
>
> We'll number the pins on the ATS board left to right as 1 to 7, ground
> being pin 1.
>
> ATS pin >> resistor >> DB25 pin
> 1 none 18 to 25 (all grounds connected together)
> 2 22K 16
> 3 22K 1
> 4 22K 4
> 5 22K 3
> 6 22K 2
> 7 220 ohm 12
>
> The resistors do a voltage translation from the 4-5 volt output of the
> parallel port to the 3.5 volt supply of the MPU. The resistor values
> aren't very critical, a size up or down from those shown should work
> okay.
>
> For instructions on doing the programming, see W1MT's web page
> <http://w1mt.qrpradio.com> You'll need a XP machine with a parallel port
> to run the IAR software and use the programmer interface.
>
>
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com

1872. Re: [AT_Sprint] Re: RIT on 80m with ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-19 22:19:57 UTC
From: Mark Langenfeld
Topic: 1838 Message: 1872

Sorry, did I miss the answer to Carey's question?

Tnx es 72,

Mark -- WA9ETW

----- Original Message -----
From: radio_kx0r
To: AT_Sprint@yahoogroups.com
Sent: Thursday, October 18, 2007 6:13 PM
Subject: [AT_Sprint] Re: RIT on 80m with ATS3B

.
>
> If anyone wants thier MPU reprogrammed, I'll be happy to do it and
pay for
> return postage. The most resent kits sent out should be fine as
they are.
>
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com
>
Steve,

Thanks for this level of support! I haven't assembled my kit yet -
can you reprogram easier with the MPU chip by itself, or do you need
the entire board assembled? I'm pretty sure my kit is in the first
lot of 100.

Thanks

KX0R
Carey Fuller

1873. Re: [AT_Sprint] Simple programmer interface

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-19 23:16:48 UTC
From: mbhayden
Topic: 1838 Message: 1873
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

1874. Free ATS3-B Label Offer

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-20 01:21:48 UTC
From: WA0ITP
Topic: 1874 Message: 1874

The free label program continues. I just finished a design for Steve's awesome ATS3-B. What a rig! 6 bands, digital ready, and a frequency display - in an Altoids!!

Please take a look at them here http://www.wa0dx.org/wa0itp/ats3b.html Suggestions for improvement are welcome.

If you'd like one, just drop me a note, no SASE needed.

I love this radio stuff!
72 73
Terry, WAØITP
http://www.wa0dx.org/wa0itp
http://www.wa0dx.org
http://www.4sqrp.com/

1875. Re: [AT_Sprint] Re: RIT on 80m with ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-20 03:32:41 UTC
From: Steven Weber
Topic: 1838 Message: 1875

>Sorry, did I miss the answer to Carey's question?

Which was, can you send just the MPU if it hasn't been soldered in yet?

Yes, you can. Send it in a padded envelope or in a regular letter envelope, but in that case, use a piece of cardboard with a hole cut into it to place the chip in. Otherwise the leads get bent out of shape. And use the static bag.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

1876. Re: [AT_Sprint] Simple programmer interface

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-20 03:28:45 UTC
From: Steven Weber
Topic: 1838 Message: 1876

> If I want to program the processor with my laptop, which has no
>printer port ...

Then you will have to buy the wicked expensive USB programmer from TI.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

1877. Re: [AT_Sprint] Simple programmer interface

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-20 12:26:57 UTC
From: john
Topic: 1838 Message: 1877

Or a very cheap old PC!
:-)

John K5MO

At 11:28 PM 10/19/2007, Steven Weber wrote:
> > If I want to program the processor with my laptop, which has no
> >printer port ...
>
>Then you will have to buy the wicked expensive USB programmer from TI.
>72,
>Steve, KD1JV
>"Melt Solder"
>White Mountains of New Hampshire
>http://kd1jv.qrpradio.com
>
>
>
>Yahoo! Groups Links
>
>
>

1878. Re: Missing part for ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-20 13:12:07 UTC
From: Marko Markkanen
Topic: 1815 Message: 1878

Steve,

I am also missing the same part U4. Can you send one?

I'll send private mail with my address.

72, Marko - OH7KD

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
>
> >I have been sending some private mail to Steve/KD1JV during the last
> >10 days without any answers. Perhaps my mail is circulating i
> >cyberspace?
>
> Must be, best I can tell, I never got the original message(s)
>
> >I am missing a vital part in my ATS3B kit.
> >It is U4, 74LVC1G3157 that is missing.
> >
> >Could you please send me one replacement?
>
> Be in the mail Monday.
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com
>

1879. Re: Simple programmer interface

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-20 13:59:57 UTC
From: hb9axl
Topic: 1838 Message: 1879

Hi folks,

Have a problem to connect and downlaod to the controller:

* soldered this cable
* IAR settings: followed instructions of W1MT, except device:
MSP430F1232
* compilation successful
* ATS3B running, then Ctrl-D, start debug:
* a window comes up: Emulator, "initializing hardware"
* in headphones some puls noise (LPT1 seems working)
* after a few seconds a new window: Emulator, "fatal error:
security fuse blown. Session aborted"

Isn't the controller memory rewritable?

Double checked cable and IAR settings.
PC: XP
IAR: V4.09A

Tried the same with:
PC: W98
IAR: V3.21A
About the same behavour.

Any idea?
Perhaps the full project (not just the .s43 file) could help?

Tnx es 73, paul
HB9AXL

1880. Re: [AT_Sprint] Re: RIT on 80m with ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-20 14:42:52 UTC
From: Mark Langenfeld
Topic: 1838 Message: 1880

Thanks, Steve. On the way this week.

Very much appreciate the follow-up.

Tnx es 72,

Mark -- WA9ETW

----- Original Message -----
From: Steven Weber
To: AT_Sprint@yahoogroups.com
Sent: Friday, October 19, 2007 10:32 PM
Subject: Re: [AT_Sprint] Re: RIT on 80m with ATS3B

>Sorry, did I miss the answer to Carey's question?

Which was, can you send just the MPU if it hasn't been soldered in yet?

Yes, you can. Send it in a padded envelope or in a regular letter envelope,
but in that case, use a piece of cardboard with a hole cut into it to place
the chip in. Otherwise the leads get bent out of shape. And use the static
bag.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

1881. Re: [AT_Sprint] Re: Simple programmer interface

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-20 16:04:06 UTC
From: Steven Weber
Topic: 1838 Message: 1881

> * after a few seconds a new window: Emulator, "fatal error:
>security fuse blown. Session aborted"

I did the intial tests of the interface with IAR version 2.31C

Just tried it with the newer version 3.4B and had the same "fatal error" message come up. Then I tried my TI programmer and it worked. Then I tried the simple programmer again and it worked! I have no idea why it didn't work at first (tried it several times), then started working, and kept working. Also tried closing IAR and restarting it and it is still working now.

I'll have to try programming another board with a different version of the firmware and try to figure out whats happening.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

1882. First AT3B QSO is DX

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-20 18:48:52 UTC
From: john
Topic: 1838 Message: 1882

Just finished first QSO with the AT3B on 20m 1st call snagged DK3WW operating in the Worked All Germany contest.

Good DX with 4 watts.

Whooo Hoooo!

John K5MO

1883. Re: V3 firmware

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-20 19:40:42 UTC
From: w1mt
Topic: 1864 Message: 1883

Steve,

Check around rst2:, looks like you still need to be in straight key
mode to get to the version annunciation.

-mike

--- In AT_Sprint@yahoogroups.com, "kd1jv" <kd1jv@...> wrote:
>
> For those of you who can program the mps430, the latest version of the
> firmware is now in the files section, as a zipped file.
>

1884. Re: [AT_Sprint] Simple programmer interface

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-20 23:29:07 UTC
From: Steven Weber
Topic: 1838 Message: 1884

Try changing all the 22K resistors to 220 ohm. That seems to do the trick here on both PC's running the Version 3.4 and version 2.3 IAR.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

1885. Re: Simple programmer interface

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-21 09:03:46 UTC
From: pks57
Topic: 1838 Message: 1885

Dear Steve

> Try changing all the 22K resistors to 220 ohm. That seems to do the trick
> here on both PC's running the Version 3.4 and version 2.3 IAR.

Confirmed. I had the same problem as HB9AXL; with the changed resistors, reprogramming now works perfectly. Mni tnx for your support!

Peter / HB9TVK

PS: Kudos to you for these ufb little rigs (I own the 3A and 3B). Big fun to build, operate and a truly amazing piece of engineering!

1886. Re: Simple programmer interface

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-21 09:25:07 UTC
From: hb9axl
Topic: 1838 Message: 1886

Hello Steven,

With 220ohm resistors it works, yeahhhhh!!! IAR soft is current version from TI homepage.
Now our micro-radio is like the big ones: we can download new firmware too - hi!

Tnx es 73, paul
HB9AXL

P.S. Very pleased abt DFE on 80m

1887. ATS-3A It works!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-21 16:46:05 UTC
From: ve3wmb
Topic: 1887 Message: 1887

Folks :

I am happy to report that my ATS-3A works !

I just made an ARCI contest QSO with K4AXF on 40M. I am getting about 2W out with 9v in!
I still have to build the other band modules and package the rig up but no problems encountered with the rig so far.

I used "tack one corner first" soldering technique and followed Steve's suggestion of using a toothpick and beeswax for moving some of the smaller components around.
I also followed the "best practice" of building inside a small cardboard box lid to avoid losing
components and that worked great.

This is an amazing little rig. I was skeptical that I could actually build this rig and make it
work but I bought the smallest tip I could find for my soldering iron and took my time and built very carefully and that approach paid off.

Michael VE3WMB

1888. Re: [AT_Sprint] Re: Simple programmer interface

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-21 18:52:52 UTC
From: Steven Weber
Topic: 1838 Message: 1888

>With 220ohm resistors it works, yeahhhhh!!!

Glad we figured that out!

> IAR soft is current version
>from TI homepage.

Seems everytime you learn one version, they come out with another!

>P.S. Very pleased abt DFE on 80m
>
Oh yeah, I forgot you Swiss use the rig on 80M for the mountain contest in the summer. The main reason a lot of you got the rig!

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

1889. Re: Finally building my ATS-3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-21 19:34:12 UTC
From: ve3wmb
Topic: 1785 Message: 1889

My kit had a 22uf cap for C54 and this is what I installed. I am hearing a noticeable thump on T->R transition so I will try changing this to 100 uf and see how that works.

Thanks for the feedback.

Michael VE3WMB

--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:
>
> Changing C54 is the most bang for your buck mod.
> Although the last run I believe that Steve had a
> bigger cap in the kit so check yours first. It should
> be at least 100uF.
>
> Search the messages for "keying thump" and "keying
> envelope fix" for others that you may or may not want
> to do. I suggest build it stock (except for C54) and
> if you notice the artifacts associated with the other
> fixes then do them.
>
> -mike/w1mt
>
>
> http://groups.yahoo.com/group/AT_Sprint/message/300
>
>
> --- ve3wmb <mbabineau@...> wrote:
> >
> > I have a question .. I haven't been following this
> > list too closely
> > ... were there any last-minute component changes or
> > errata for the 3A?
>
>
>
>

1890. Stooopid question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-21 23:36:47 UTC
From: Tim
Topic: 1890 Message: 1890

Okay Guys,

I hate to admit such a stunning level of ignorance, but not only have I never built an SMT radio, I have never used a 0.7mm plug for power. So... I need some BASIC help: is the short, square terminal the + or - terminal, and how does one attach a wire to it?

Tnx,

Tim KX3H

1891. Run for the Bacon, 10/21/2007, 6:00 pm

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-22 00:40:50 UTC
From: AT_Sprint@yahoogroups.com
Topic: 1891 Message: 1891

Reminder from: AT_Sprint Yahoo! Group
http://groups.yahoo.com/group/AT_Sprint/cal

Run for the Bacon
Sunday October 21, 2007
6:00 pm - 8:00 pm
(This event repeats every month on the third Sunday.)
Location: Your shack or anywhere

Notes:
This Sunday evening, the Flying Pigs Amateur Radio Club International will be holding its monthly Run For The Bacon. This is a friendly, two hour QRP CW Sprint, which is open to ALL radio amateurs, will last from 9:00 - 11:00PM EDT (0200-0400 UTC Monday).

You may work stations once per band on 160, 80, 40, 20, 15 or 10 Meters. Suggested starting frequencies are 1.812, 3.562, 7.044, 14.062, 21.062, and 28.062 MHz.

The exchange is RST, S/P/C (State, Province, Country) and Flying Pigs membership number. If you're not a member of the Flying Pigs, and would like to be; then please cli

All Rights Reserved
Copyright ? 2007
Yahoo! Inc.
http://www.yahoo.com

Privacy Policy:
http://privacy.yahoo.com/privacy/us

Terms of Service:
http://docs.yahoo.com/info/terms/

1892. Re: Stooopid question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-22 03:04:38 UTC
From: Tim
Topic: 1890 Message: 1892

To quote Rosanne Rosanadana: "Never mind."

I got an offline reply from Gil NN4CW that straightened me out.
Thanks Gil.

BTW, my ATS3B says "Da-da-da-di-dit." :) Hooray!

Tim KX3H

1893. Re: Simple programmer interface

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-22 16:14:37 UTC
From: Dave
Topic: 1838 Message: 1893

--- In AT_Sprint@yahoogroups.com, "Bill Noyce" <WBNoyce@...> wrote:
>
> Is there any chance a USB-to-printer-port adapter can work?

I think the answer to that is: No. I had a similar need with a JTAG programmer for another device and ordered a USB Printer Port. Unlike USB serial ports which come with Virtual Comm Port drivers, the USB printer port does not include a Virtual LPT Port. I only presents as a printer interface in applications that actually want to print. I searched for a few days for a suitable driver, but it appears that nobody provides one.

Since my need was for a desktop machine, I ended up ordering a PCI card. For a laptop machine, you probably would need the USB-based programming cable.

Dave, WA3OFF

1894. low power out on 40 meters

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-22 17:24:56 UTC
From: n2uz
Topic: 1894 Message: 1894

I don't know if this is normal, but I am getting lower output on 40 meters. With the voltage around 11.3 volts I get between 3.75 and 4.2 watts out on all bands except 40. There I can only get 3.1 watts out. I am using a calibrated Tekronix 100 MHz scope to make my measurements into a known good dummy load.

The waveform looks like it has 3rd order harmonics, but only on the positive peak of the sine wave (more like a double dip). The other bands are ok, granted not a perfect sine wave, but very close.

The square wave at TP1 is the same for all bands. I removed all of the LPF parts from the 40 meter module and all checked ok. Problem has to be in the module, but everything checks out ok making me think this might be normal for 40 meters.

On any of the lower banks, I don't get any increase in power by moving the turns on L1 or L2.

Has anyone have a similar reading?

Jerry, N2UZ

1895. Anomaly with Iambic B mode timing?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-23 15:03:39 UTC
From: ve3wmb
Topic: 1349 Message: 1895

I have had very little air-time with my ATS-3A but I have noticed an anomaly with the Iambic B implementation and was wondering if anyone else has as well, so I searched the list and found the post below.

Let me start by saying that I have been an Iambic guy for 26 years so my brain and fingers are hardwired for this mode of squeeze keying.

What I am seeing is that most of the time when I try to "R" is that I am getting an "F". After much playing around (with other iambic B keyers as well) I have convinced myself that something isn't quite right with the B-mode implementation in the ATS-3A firmware.
I am still trying to characterize it, but it seems like the window of opportunity to "insert a dah" is very short. I think in most implementations of iambic B that when holding the dit paddle and then tapping the dah paddle, the dah is accepted anytime before the second dit is generated. What I have observed on the ATS3 is that it seems like the dah must be tapped during the actual generation of the first dit. It seems like this window is shorter than normal. If I am really extra quick I get an "R" otherwise I seem to get an "F".

I will do some more digging, both into the specification for the timing for iambic mode B as well as the ATS-3 firmware sourcecode and let you know what I find out.

Michael VE3WMB

--- In AT_Sprint@yahoogroups.com, "ken" <ken@...> wrote:
>
> Hi Mike,
> Thanks for the great firmware mods with all the easy to read remarks!
>
> I normally pick Iambic mode B but on the ATS3, both A & B throw my fist for
> a loop. Very odd in as much that it is the only keyer that I have run into
> a problem with. I am trying to get through this via practicing into a dummy
> load. Practice never hurts... Still, I cant help but wonder about kind of
> tweak would make the difference.
>
> Ken Lotts
> aa7jc
>
> _____
> From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com]

On Behalf
> Of Michael Harnage
> Sent: Wednesday, July 25, 2007 1:04 PM
> To: AT_Sprint@yahoogroups.com
> Subject: RE: [AT_Sprint] Sleeping Pad Paddle
>
> There are two modes in the ATS firmware: iambic A and
> iambic B. I believe that iambic A is the default.
> Perhaps your other keyers are iambic B?
>
> -mike/w1mt
>

1896. Ack!!! Soldered U4 backwards

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-23 23:47:20 UTC
From: Rob May
Topic: 1896 Message: 1896

That's what I get for not paying attention. A fairly easy fix that I thought I might share for someone in the same boat. Since it's only six pins it's easy to bridge the three pins on each side with solder. A soldering iron in each hand will melt the whole lump of solder on each side and the part can be lifted off the board. A little work with some solder braid and you can try again! Worked great for me. It was the last part that I put on. It was great to hear ---.. in the phones. Now to build the rest of the band modules and align the rig. Woohoo!
Rob
NV5E

_____
Boo! Scare away worms, viruses and so much more! Try Windows Live OneCare!
http://onecare.live.com/standard/en-us/purchase/trial.aspx?s_cid=wl_hotmailnews

1897. Re: [AT_Sprint] Anomaly with Iambic B mode timing?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-23 23:48:52 UTC
From: Michael Harnage
Topic: 1349 Message: 1897

```
There is a section of code in Steve's version that
looks like this:

bic #FLB_EXTRAEL,&bflag
mov.b &P2IN,r11
bic #0fffch,r11 ; dit and dah down

cmp #0000h,r11
jne sp_lp2
bis #FLB_EXTRAEL,&bflag

sp_lp2: cmp #0009h,r6
jne sp_lp2

Change it to:

sp_lp2x: bic #FLB_EXTRAEL,&bflag
mov.b &P2IN,r11
bic #0fffch,r11 ; dit and dah down

cmp #0000h,r11
jne sp_lp2
bis #FLB_EXTRAEL,&bflag

sp_lp2: cmp #0009h,r6
jne sp_lp2x

This will let B work till the space is over. Let us
know if that helps or hurts ya?

-mike/w1mt

--- ve3wmb <mbabineau@...> wrote:

>
> What I am seeing is that most of the time when I try
> to "R" is that I
> am getting an "F". After much playing around (with
> other iambic B
> keyers as well)

_____________________________________________________
Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com
```

1898. Re: [AT_Sprint] Anomaly with Iambic B mode timing?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-24 00:53:38 UTC
From: Michael Harnage
Topic: 1349 Message: 1898

```
Ooops, move the new label up a little further, try
this instead:

sp_lp2x: bit.b #BF_IMODE,&bflag ; iambic flag
jnc sp_lp2
bic.b #F2_DITDAH,&flags+2

call #isDit
jc sp_lp2
call #isDah
jc sp_lp2

bis.b #F2_DITDAH,&flags+2

sp_lp2: cmp #9,r6
jlo sp_lp2x

I forgot to include the test for which iambic mode in
the loop...

-mike/w1mt

--- Michael Harnage <w1mt@...> wrote:

> There is a section of code in Steve's version that
> looks like this:
>

_____________________________________________
Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com
```

1899. Re: [AT_Sprint] Anomaly with Iambic B mode timing?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-24 01:39:19 UTC
From: Steven Weber
Topic: 1349 Message: 1899

>I have had very little air-time with my ATS-3A but I have noticed an
>anomaly with the Iambic B implementation and was wondering if

A strict implementation of B mode would cause an extra and opposite element to be added anytime both paddles are closed. But this can cause the extra element to be added really easy if your not careful. My Patcomm 9000 does this and drives me crazy. Therefore, I made the "both paddles closed" test happen at the end of the dot or dash. This allows dot and dash memory to work like it does in A mode, but doesn't tack on the extra element unless you really want it, by holding both paddles closed until the end of the element being sent. This is usually not a problem at high code speeds, but might be at slower speeds.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

1900. Bee's receiver....

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-24 03:51:17 UTC
From: kc7fys
Topic: 1900 Message: 1900

I took my 3B out to the park last night and had a pretty bad
session--no fault of the rig, just a bad location--lots of
environmental QRN from city stuff.
I noticed this--and will describe it in my own less-technical way.
When tuning in stations, I hear them as I scan past, stop, tune them
in so that my CW tone is on pitch with theirs--naturally. (Right?)
Anyway, without fail the signal is several times louder and easier to
copy if I tune past it so that it's at least a full octave lower,
presumably below A440, right? Does this mean that my receive window is
peaked at a frequency below what it's supposed to be? I would assume
the filter would center on zero beat with the received station. If I
do that, it sounds like it's over in the skirt, and is quite quiet.
Is my expectation right here? Did I install a capacitor wrong somewhere?
Thanks,
Jonathan 7J1AWL/KC7FYS

1901. Re: Anomaly with Iambic B mode timing?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-24 04:19:57 UTC
From: ve3wmb
Topic: 1349 Message: 1901

Steve :

That probably explains what I am seeing. I'll try the code mod that Mike suggested once I have the necessary tools to reprogram the MPU. I've been practicing my R's a bit and if I am quick I am getting a pretty good success rate so maybe I can live with it as is, at least
for a while.

The good news is that I now have 40m/30m band modules working with about 4W out at 11v in and the rig is now packaged so I am ready to roll for this weekends Polar Bear outing.

Its a great feeling to have a rig work first time and it is definitely a reflection on the quality
of the manual.

Michael VE3WMB

P.S. I am still getting some audio thumping on the TX->RX transition after replacing C54 with a 100uf cap (I even tried an extra 100 uf in parallel) so I will have to look at some of
the other T/R mods.

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
>
> >I have had very little air-time with my ATS-3A but I have noticed an
> >anomaly with the Iambic B implementation and was wondering if
>
> A strict implementation of B mode would cause an extra and opposite element
> to be added anytime both paddles are closed. But this can cause the extra
> element to be added really easy if your not careful. My Patcomm 9000 does
> this and drives me crazy. Therefore, I made the "both paddles closed" test
> happen at the end of the dot or dash. This allows dot and dash memory to
> work like it does in A mode, but doesn't tack on the extra element unless
> you really want it, by holding both paddles closed until the end of the
> element being sent. This is usually not a problem at high code speeds, but
> might be at slower speeds.
>
>
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com
>

1902. Re: [AT_Sprint] Re: Anomaly with Iambic B mode timing?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-24 10:34:20 UTC
From: Michael Harnage
Topic: 1349 Message: 1902

Thinking about it this morning I realized that the
firmware does polling on the paddle ports and is not
interrupt driven. So that means if you are used to
just tapping a paddle and expecting it to insert a dah
or dit you might miss the poll event. You will need to
hold the paddles closed a little to ensure that the
test is executed. Experiment.

On the "thumping" look at my photos on the group
website to see where I put the serial R and shunt C
for the control lines.

-mike/w1mt

--- ve3wmb <mbabineau@...> wrote:

> Steve :
>
> That probably explains what I am seeing. I'll try
> the code mod that Mike suggested once I
> have the necessary tools to reprogram the MPU. I've
> been practicing my R's a bit and if I
> am quick I am getting a pretty good success rate so
> maybe I can live with it as is, at least
> for a while.
>

Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

1903. Over driving on 30 meters

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-24 11:59:02 UTC
From: Buddy Brown
Topic: 1903 Message: 1903

I finished my ATS3B and am in the process of tuning the Band Modules.
Everything is working fine business and I am "tickled to death" with it.
However, I am noticing an anomaly with 30 meters that I haven't been
able to figure out. I am using my QBSA for these tests and adjustments,
and am transmitting into a dummy load with the QBSA wattmeter showing
"0" power reflected. So I know the load is not reactive. But, with the
30 meter module in the rig, the protective circuit in the radio is shutting
the rig down and displaying an "E" just as if there is a large SWR being
seen. This doesn't happen on the other bands. I can't get a power reading,
because the rig shuts down too quickly, but I did notice that when I reduce
the voltage to 9.2 volts the rig keeps transmitting and the wattmeter sees
4.25 or so watts, still with no reflected power.
I also just noticed that the frequency readout on the QBSA changes from
10.110 MHz to 15.247 MHz. I have not been able to hear this on my
TS2000. I can hear the 10.110 MHz signal but not the 15.240 MHz signal.
I thought that the rig was transmitting on both and causing the problem,
but apparently not. It looks as though the rig is just transmitting too
strong
a signal on this band.
Has anyone else noticed anything like this?

Buddy - N5BUD

1904. Re: Anomaly with Iambic B mode timing?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-24 13:04:38 UTC
From: ve3wmb
Topic: 1349 Message: 1904

Thanks Mike I'll give this a try once I figure out
what I need to do to re-Flash the MPU.

Michael VE3WMB

--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:
>
> Ooops, move the new label up a little further, try
> this instead:
>
> sp_lp2x: bit.b #BF_IMODE,&bflag ; iambic flag
> jnc sp_lp2
> bic.b #F2_DITDAH,&flags+2
>
> call #isDit
> jc sp_lp2
> call #isDah
> jc sp_lp2
>
> bis.b #F2_DITDAH,&flags+2
>
> sp_lp2: cmp #9,r6
> jlo sp_lp2x
>
> I forgot to include the test for which iambic mode in
> the loop...
>
> -mike/w1mt
>
> --- Michael Harnage <w1mt@...> wrote:
>
> > There is a section of code in Steve's version that
> > looks like this:
> >

1905. physically securing Toroids to the Band Module Boards

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-24 13:23:24 UTC
From: ve3wmb
Topic: 1905 Message: 1905

I am a little concerned about wear-and-tear on the toroids on the band modules .. especially the ones with the very small gauge wire. Any suggestions on what I might use to secure the toroids to the board? A bit of Epoxy perhaps?

In my ALT tuner I used the trick that Doug Hendricks suggested which was to use a small sliver from a hot-glue stick and then slightly heat the coil with a hair-dryer / heat-shrink gun to melt the glue. This worked well.

I am wondering if this has any significant effect on the inductance of the coil? It doesn't matter a lot in a tuner but it would on the ATS-3. Maybe I'll dig up a spare core and try this to see if there is any difference before and after. Any other suggestions ?

Michael VE3WMB

1906. Re: [AT_Sprint] physically securing Toroids to the Band Module Boards

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-24 14:46:58 UTC
From: Mark Brueggemann
Topic: 1905 Message: 1906

--- ve3wmb <mbabineau@...> wrote:

> Any suggestions on what I might use to secure the toroids
> to the board? A bit of Epoxy perhaps?

If it's "permanent" I use two part expoxy or silicone. If it's something I think I might want to mess with again I use hot melt glue. Sometimes with a sensitive tank circuit like a VFO the glue might detune it ever so slightly but for something like a matching network it shouldn't affect it.

Mark K5LXP
Albuquerque, NM

1907. Re: Over driving on 30 meters

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-24 15:02:30 UTC
From: Dave
Topic: 1903 Message: 1907

--- In AT_Sprint@yahoogroups.com, "Buddy Brown" <buddybrown@...> wrote:
>
> when I reduce the voltage to 9.2 volts the rig keeps transmitting
> and the wattmeter sees 4.25 or so watts, still with no reflected
> power.

Double-check the turns counts on LF1 and LF2 and caps values for
CF1-CF4. You could also try changing the spacing of the turns on
LF1 and LF2 (often in opposite directions) to increase (needed in
your case) or decrease the input impedance presented by the filter.
4.25W on a 9.2V supply does seem rather high.

Dave

1908. Re: physically securing Toroids to the Band Module Boards

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-24 15:22:31 UTC
From: radio_kx0r
Topic: 1905 Message: 1908

Michael,

You're right to be concerned about the fragile band modules. They are the most vulnerable part of the radio, especially in the field. I used small dabs of 5-minute epoxy to secure my toroids to the board. You just need a dot under each, opposite the side where the windings are attached - no need to cover the whole winding. Don't do this until you're really finished with tweaking the coils for best power output.

Be sure to clean the board with alcohol or other pcb cleaner prior to using the epoxy - otherwise the glue may not adhere well.

I get almost 5W with 12V to my ATS-3A on all 4 bands, after making some tweaks, so the toroids are OK. I checked harmonics with a spectrum analyzer, and they're suppressed well. The toroids warm slightly, especially on 20M, if you hold the key down.

Gluing the toroids down is preferable to ripping one loose while changing modules in the field.

The hot glue method sounds OK. I don't know how its RF properties compare with epoxy. I like epoxy because you can control the size and position of the dab. I just got a Heathkit QM1 Q meter at a local hamfest, so I could test these adhesives and report back. The Q meter can detect changes in the inductance and Q caused by the dielectric properties of adhesives. Stay tuned - I want to answer this one for myself as well as the group.

Take a look on the Photos section of this site, and in my part you'll find images of my band modules.

Go easy with the adhesive - just a dab...

72,
Carey
KX0R

--- In AT_Sprint@yahoogroups.com, "ve3wmb" <mbabineau@...> wrote:
>
>
>
> I am a little concerned about wear-and-tear on the toroids on the
band
> modules .. especially the ones with the very small gauge wire. Any
> suggestions on what I might use to secure the toroids to the board?
> A bit of Epoxy perhaps?

>
> In my ALT tuner I used the trick that Doug Hendricks suggested which
> was to use a small sliver from a hot-glue stick and then slightly
heat
> the coil with a hair-dryer / heat-shrink gun to melt the glue. This
> worked well.
>
> I am wondering if this has any significant effect on the inductance
of
> the coil? It doesn't matter a lot in a tuner but it would on the
> ATS-3. Maybe I'll dig up a spare core and try this to see if there
is
> any difference before and after. Any other suggestions ?
>
>
> Michael VE3WMB
>

1909. Re: [AT_Sprint] physically securing Toroids to the Band Module Boards

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-24 15:25:21 UTC
From: Ted W2TAG
Topic: 1905 Message: 1909

I'm wondering the same thing and think a little dab of Blu-Tack might do the not so permanent job without dissolving the wire insulation. Has anybody out there in QRP land tried this method of securing the toroids? Thanks,

Ted, W2TAG

ve3wmb wrote:>
>
> I am a little concerned about wear-and-tear on the toroids on the band
> modules .. especially the ones with the very small gauge wire. Any
> suggestions on what I might use to secure the toroids to the board?
> A bit of Epoxy perhaps?
>
> In my ALT tuner I used the trick that Doug Hendricks suggested which
> was to use a small sliver from a hot-glue stick and then slightly heat
> the coil with a hair-dryer / heat-shrink gun to melt the glue. This
> worked well.
>
> I am wondering if this has any significant effect on the inductance of
> the coil? It doesn't matter a lot in a tuner but it would on the
> ATS-3. Maybe I'll dig up a spare core and try this to see if there is
> any difference before and after. Any other suggestions ?
>
>
> Michael VE3WMB

1910. Re: [AT_Sprint] Bee's receiver....

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-24 17:00:23 UTC
From: Steven Weber
Topic: 1900 Message: 1910

>When tuning in stations, I hear them as I scan past, stop, tune them
>in so that my CW tone is on pitch with theirs--naturally. (Right?)
>Anyway, without fail the signal is several times louder and easier to
>copy if I tune past it so that it's at least a full octave lower,
>presumably below A440, right?

First, the side tone in the rig is generated by software, so it does not represent the actual offset transmitted by the rig. The side tone frequency in the B is 608 Hz, which matches the 600 Hz peak in the audio filter pretty closely. Therefore, the received signal should peak very close to the tone of the side tone.

Its possible you don't have the BFO trimmer set properly or there is a bad solder connection in the audio filter. One test is to connect the audio up to PC audio spectrum analyzer and see at what frequency the audio peaks at. Should be 600 Hz. Another it to use another rig to see if the frequencies match when talking between the two.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

1911. Re: [AT_Sprint] Bee's receiver....

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-24 17:17:34 UTC
From: Gil Stacy
Topic: 1900 Message: 1911
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

1912. Re: physically securing Toroids to the Band Module Boards

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-24 17:55:20 UTC
From: rds_6
Topic: 1905 Message: 1912

--- In AT_Sprint@yahoogroups.com, "Ted W2TAG" <w2tag@...> wrote:
> I'm wondering the same thing and think a little dab of Blu-Tack might do the
> not so permanent job without dissolving the wire insulation. Has anybody out
> there in QRP land tried this method of securing the toroids? Thanks,
> Ted, W2TAG

Ted,
I used a yellow version of Blu-Tack, namely HandiTak, which was $0.97 at Walmart, of which about 2% of the quantity in the package was enough to secure all of my toroids. However, while visiting another QRPer who has a fancy HP Q meter, I wrapped some of the HandiTak around a random air-core coil and observed an extremely slight change in Q. While I didn't think much of it, he said that other materials he has used to secure toroids (he prefers E-6000 silicone sealant) do not change the Q whatsoever, and he advised me against using anything that changes the Q in the slightest. Since I don't have any spare enamelled wire to rewind the toroids after inevitably breaking a few wires if I were to try to remove the HandiTak, I'm going to leave it in place and see how my ATS 3B R2 performs before thinking about removing it.
72,
Ross N0GSZ

1913. Re: Bee's receiver....

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-24 18:13:15 UTC
From: Randal
Topic: 1900 Message: 1913

Or you could go to the "Files" section of this site and download it.

73,

-- In AT_Sprint@yahoogroups.com, "Gil Stacy" <gilstacy@...> wrote:
>
> If you need a spectrum analyzer program, scroll down this site until
you see
> the free version download of spectrogram:
> http://www.n0ss.net/index_k2.html
> GL es 73 Gil NN4CW
>

1914. Re: [AT_Sprint] Re: physically securing Toroids to the Band Module Boards

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-24 19:06:17 UTC
From: Chris Herd
Topic: 1905 Message: 1914

rds_6 wrote:
>
> --- In AT_Sprint@yahoogroups.com <mailto:AT_Sprint%40yahoogroups.com>,
> "Ted W2TAG" <w2tag@...> wrote:
> > I'm wondering the same thing and think a little dab of Blu-Tack
> might do the
> > not so permanent job without dissolving the wire insulation. Has
> anybody out
> > there in QRP land tried this method of securing the toroids? Thanks,
> > Ted, W2TAG
>
> Ted,
> I used a yellow version of Blu-Tack, namely HandiTak, which was $0.97
> at Walmart, of which about 2% of the quantity in the package was
> enough to secure all of my toroids. However, while visiting another
> QRPer who has a fancy HP Q meter, I wrapped some of the HandiTak
> around a random air-core coil and observed an extremely slight change
> in Q. While I didn't think much of it, he said that other materials
> he has used to secure toroids (he prefers E-6000 silicone sealant) do
> not change the Q whatsoever, and he advised me against using anything
> that changes the Q in the slightest. Since I don't have any spare
> enamelled wire to rewind the toroids after inevitably breaking a few
> wires if I were to try to remove the HandiTak, I'm going to leave it
> in place and see how my ATS 3B R2 performs before thinking about
> removing it.
> 72,
> Ross N0GSZ
>
>
Hi

Has anybody tried a small square of double sided foam tape between the
circuit board and the toroid? I think the foam is some form of polythene.

73

Chris
ZL2TCH

1915. Finally started my build

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-25 03:51:28 UTC
From: Garry
Topic: 1915 Message: 1915

As the header says, I finally got all other projects out of the way as well as other commitments. Whew. I have to say that the first little while was totally discouraging though. I spent 3 hours trying to place and solder capacitors and at the end had 5 satisfactorily installed. Time to re-assess the situation.

First I found a nice heavy machine vice to secure the circuit board to keep it in place and that eliminated one issue, then I went down to Canadian Tire and picked up a heat gun to try that.

I tried the heat gun on an old circuit board. Let me tell you, if you are a ham that is inclined to scavenge parts from old circuits, this is the tool. It works amazingly well and no tedious solder sucking etc.

After that experience I decided to have a go with the solder paste and the remaining .1 caps. Done in a few minutes. What a difference once I learned how to get the paste out and sticking where I wanted it on the pads. I'm thinking that the first little bit of paste may have been slightly dried out as it gave me trouble but now all seems to be working well although from time to time I had to use a toothpick to smear the glob of paste where I wanted it.

I stopped with the .01 caps all installed. That was enough for today as I had used up plenty of time to get where I now am. By the way, the solder paste/heat gun method leaves a much neater finished product as the capillary action (I think it is) causes the component to center itself on the pads which leaves parts placed neater than I could do with the solder iron method

I've got plenty left to do but I have to admit that I was about to post a plea for someone to build this thing for me, at least the main board as I figured I could handle the band modules. I really have wanted to get one of these since almost a year ago when I first heard of the ATS sprint etc but the fact that they had sold out and were no longer available coupled with the fear that I could not do it kept me from trying.

I still have no idea if it will work or not when done but at least I will have the challenge of building it and I am taking real care and cross checking each component placement as I go so hopefully no errors there. My wife (also a ham) looked at the tiny caps and just laughed and walked away. Not for her I guess hi hi. I think her comment was that she was glad it was me and not her that had to build it.

When I get it done, and working I hope to take it down to the beach and try a half wave end fed at the waters edge. Always hear how good

antennas work when down at the salt chuck and I want to find out for myself. With this rig and it's minimal size, setup should be a breeze.

well that's enough bandwidth for now.

73 all

Garry/Ve7ajj/Va7nv

1916. Re: Finally started my build

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-25 04:55:31 UTC
From: radio_kx0r
Topic: 1915 Message: 1916

--- In AT_Sprint@yahoogroups.com, "Garry" <ve7ajj@...> wrote:

Garry,

Good luck on finishing your build. You are ahead of me - I'm waiting for a snowy day and sufficient motivation before I start with the solder paste.

When you get the rig finished, you'll be amazed at what it can do in a good location. Here's a testimonial:

I took my ATS-3A up to the mountain park near here a couple of weeks ago - I used a fishing pole to hang an extended double zepp, cut for 20 meters, between two ponderosa pines. I sat in a meadow about 1000 feet above the plains and cities to the east, called CQ on 14.060, and had two nice, solid, ragchew QSO's with stations across the country. The third QSO was the amazing one - I contacted W9XS/M - he gave me 589/QSB and I have him 599 - he was solid and near Chicago. Then he told me he was on a BICYCLE travelling 17 mph, running 100W with an IC706 and a CB whip on the bike! There he was, 599, coming out of my Altoids box up in a field full of dried horsemint plants...and sending pretty good CW considering what he was also doing. Somehow he was copying those three little 2N7000's out there on the road, riding in a 20 mph wind. We QSO'd for 15 or 20 minutes, solid, both telling each other how amazing this was. It didn't hurt that the lobe of my zepp was right on him, and it was late afternoon on the path.

Later, after I dropped the antenna and rolled it up, 11 wild turkeys walked out of the woods right behind where I'd been sitting....

The ATS rigs can deliver many surprises!

I ragchewed with K5TF in Atlanta twice this fall with the ATS-3A, both times from campsites in the woods. The first time I was camped WEST of Laramie Peak in Wyoming (wrong side of the mountain); the second time I was camped in the local mountains near Ward, CO, a few weeks later with snow falling on the tent. Both times I used a dipole strung through pretty thick woods. Dick was running 2 watts both times, with a loop.

Enough said - Steve created an amazing radio.

Carey
KX0R

>
> As the header says, I finally got all other projects out of the way
> as well as other commitments. Whew. I have to say that the first
> little while was totally discouraging though. I spent 3 hours
trying
> to place and solder capacitors and at the end had 5 satisfactorily
> installed. Time to re-assess the situation.
>
> First I found a nice heavy machine vice to secure the circuit board
to
> keep it in place and that eliminated one issue, then I went down to
> Canadian Tire and picked up a heat gun to try that.
>
> I tried the heat gun on an old circuit board. Let me tell you, if
> you are a ham that is inclined to scavenge parts from old circuits,
> this is the tool. It works amazingly well and no tedious solder
> sucking etc.
>
> After that experience I decided to have a go with the solder paste
and
> the remaining .1 caps. Done in a few minutes. What a difference
once
> I learned how to get the paste out and sticking where I wanted it
on
> the pads. I'm thinking that the first little bit of paste may have
> been slightly dried out as it gave me trouble but now all seems to
be
> working well although from time to time I had to use a toothpick to
> smear the glob of paste where I wanted it.
>
> I stopped with the .01 caps all installed. That was enough for
today
> as I had used up plenty of time to get where I now am. By the way,
> the solder paste/heat gun method leaves a much neater finished
product
> as the capillary action (I think it is) causes the component to
center
> itself on the pads which leaves parts placed neater than I could do
> with the solder iron method
>
> I've got plenty left to do but I have to admit that I was about to
> post a plea for someone to build this thing for me, at least the
main
> board as I figured I could handle the band modules. I really have
> wanted to get one of these since almost a year ago when I first
heard
> of the ATS sprint etc but the fact that they had sold out and were
no
> longer available coupled with the fear that I could not do it kept
me
> from trying.

>
> I still have no idea if it will work or not when done but at least
I
> will have the challenge of building it and I am taking real care
and
> cross checking each component placement as I go so hopefully no
errors
> there. My wife (also a ham) looked at the tiny caps and just
laughed
> and walked away. Not for her I guess hi hi. I think her comment
was
> that she was glad it was me and not her that had to build it.
>
> When I get it done, and working I hope to take it down to the beach
> and try a half wave end fed at the waters edge. Always hear how
good
> antennas work when down at the salt chuck and I want to find out
for
> myself. With this rig and it's minimal size, setup should be a
breeze.
>
> well that's enough bandwidth for now.
>
> 73 all
>
> Garry/Ve7ajj/Va7nv
>

1917. Re: Bee's receiver....

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-25 11:55:32 UTC
From: kc7fys
Topic: 1900 Message: 1917

Thanks.
That's very helpful. I'll crank that up this weekend. It's quite possible I didn't do my initial calibration correctly. When I engage in a QSO, I hear the received station best around what I would identify as maybe 250hz--if the note I'm imagining has a fundamental an octave below A440 on the piano. (Can you tell that's my background?)
I'll let you know.
Jonathan

1918. Re: physically securing Toroids to the Band Module Boards

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-25 13:00:11 UTC
From: ve3wmb
Topic: 1905 Message: 1918

Carey :

I can't measure the impacts on Q, only on inductance .. both are important in this case. This would be a great experiment to try.

I found the hot glue trick very easy to apply on my ALT tuner but I am reluctant to try it on the ATS3 without some idea of how this impacts the characterstics of the coils.

Cheers,

Michael

--- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@...> wrote:
>
>

<snip>

>
> The hot glue method sounds OK. I don't know how its RF properties
> compare with epoxy. I like epoxy because you can control the size
> and position of the dab. I just got a Heathkit QM1 Q meter at a
> local hamfest, so I could test these adhesives and report back. The
> Q meter can detect changes in the inductance and Q caused by the
> dielectric properties of adhesives. Stay tuned - I want to answer
> this one for myself as well as the group.
>
<snip>

> 72,
> Carey
> KX0R
>

1919. Re: Mounting Toroids with glue and Q changes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-26 04:04:15 UTC
From: radio_kx0r
Topic: 1905 Message: 1919

--- In AT_Sprint@yahoogroups.com, "ve3wmb" <mbabineau@...> wrote:

> Carey :
>
> I can't measure the impacts on Q, only on inductance .. both are
> important in this case. This would be a great experiment to try.
>
> I found the hot glue trick very easy to apply on my ALT tuner but I am
> reluctant to try it on the ATS3 without some idea of how this impacts
> the characterstics of the coils.
>
> Cheers,
>
> Michael

Michael,

I just ran Q measurements of 4 toroids using different glues. Here's the short version followed by the technical details:

I wound five T68-6 cores with 26 turns of #22 wire. All measured about 3.75 uH on my AADE L/C Meter II. I measured the inductance and Q of each inductor before applying glues to four of them. The fifth was left as a control.

Here are the results:

Coil #1 Q w/o glue 207 control Q later w/o glue 207
Coil #2 Q w/o glue 207 5 minute epoxy Q with epoxy 206
Coil #3 Q w/o glue 208 hot glue Q with hot glue 206
Coil #4 Q w/o glue 204 Duco cement Q with Duco 204
Coil #5 Q w/o glue 211 GE silicone 1 Q with silicone 208

Inductances with glue all measured within 1% of initial values on the AADE L/C meter. Any inductance changes were beyond the accuracy of the meter and methods, and not significant.

The changes in Q are so small that I think you can use any of these glues to mount your toroids. I used a large amount of glue on both sides of the full windings for these tests. Much less glue will be required to secure a toroid to a board. In practice any reduction in Q will be negligible.

The Q's were measured with a Heathkit QM-1 Q meter I recently obtained at a hamfest. I have been through the manual and checked out this instrument, but so far I have no way of verifying the absolute accuracy of these measurements; nevertheless, the consistency is amazing. I was

very careful when adjusting the settings of this vintage vacuum tube instrument. It is interesting that none of the Q's increased, since we expect only degradation. All readings were done several times to check for consistency. Getting to 1% precision with a QM-1 is stretching the limits of the machine and operator.

All glues were allowed to cure about 10 hours. The silicone might need longer to complete its cure, based on my experience with the stuff.

It is possible that there might be effects at high levels of RF that don't show up in these low-signal measurements.

What I've learned from my experience is that the inductance of these toroids can change by 5% or more just by bumping the turns together or apart. If they're wound loose, ordinary handling in the field will cause them to change how they perform in your rig MUCH MORE than any effect caused by the glues I tested. Therefore I recommend you glue down at least one side of each toroid after you're sure you've got them adjusted right. It can even be suggested that extra glue on the top sides might make these coils more durable - but I haven't done this on mine.

Comments on adjusting your filters: You should do your adjustments with the supply voltage you plan to run with mostly. It's also very important to monitor the current to the rig. Since you're changing the impedance seen by the PA, you can vary both power output and efficiency, sometimes one at the expense of the other. It's a judgment call, but you need to watch both numbers. You don't win if you get 7 watts out of the rig and then burn out the mosfets! 5 watts with 12 volts is possible for the ATS-3A.

The reason no one can tell you how to hit optimum is that the inductance varies several percent just by how you wind the turns. The cores have some small variation lot-to-lot. The capacitors have tolerances also. It all factors together to determine the match. In the end you may have to play with adding and subtracting capacitance as well as squeezing or spreading turns. You can take a small cap, a few pf, and experiment to see if adding capacitance helps or hurts. Go easy, be patient, and don't leave the rig keyed too long - it's trial-and-error and a multivariable network, but you really can optimize these filters. Think "nice compromise".

In the end you really should check the rig's spectral purity, if you have access to a spectrum analyzer. As long as your changes are small, you should be OK. Large changes are NOT required, and the rig should be clean as long as you're not messing around with the basic design numbers for these filters.

1920. Re: Mounting Toroids with glue and Q changes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-26 06:10:22 UTC
From: dave
Topic: 1905 Message: 1920

Carey,

Many thanks, excellent information!

73 de dave
ab9ca

--- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@...> wrote:
>
> --- In AT_Sprint@yahoogroups.com, "ve3wmb" <mbabineau@> wrote:
>
> > Carey :
> >
> > I can't measure the impacts on Q, only on inductance .. both are
> > important in this case. This would be a great experiment to try.
> >
> > I found the hot glue trick very easy to apply on my ALT tuner but I am
> > reluctant to try it on the ATS3 without some idea of how this impacts
> > the characterstics of the coils.
> >
> > Cheers,
> >
> > Michael
>
> Michael,
>
> I just ran Q measurements of 4 toroids using different glues. Here's
> the short version followed by the technical details:
>
> I wound five T68-6 cores with 26 turns of #22 wire. All measured about
> 3.75 uH on my AADE L/C Meter II. I measured the inductance and Q of
> each inductor before applying glues to four of them. The fifth was
> left as a control.
>
> Here are the results:
>
> Coil #1 Q w/o glue 207 control Q later w/o glue 207
> Coil #2 Q w/o glue 207 5 minute epoxy Q with epoxy 206
> Coil #3 Q w/o glue 208 hot glue Q with hot glue 206
> Coil #4 Q w/o glue 204 Duco cement Q with Duco 204
> Coil #5 Q w/o glue 211 GE silicone 1 Q with silicone 208
>
> Inductances with glue all measured within 1% of initial values on the
> AADE L/C meter. Any inductance changes were beyond the accuracy of the
> meter and methods, and not significant.
>

> The changes in Q are so small that I think you can use any of these
> glues to mount your toroids. I used a large amount of glue on both
> sides of the full windings for these tests. Much less glue will be
> required to secure a toroid to a board. In practice any reduction in Q
> will be negligible.
>
> The Q's were measured with a Heathkit QM-1 Q meter I recently obtained
> at a hamfest. I have been through the manual and checked out this
> instrument, but so far I have no way of verifying the absolute accuracy
> of these measurements; nevertheless, the consistency is amazing. I was
> very careful when adjusting the settings of this vintage vacuum tube
> instrument. It is interesting that none of the Q's increased, since we
> expect only degradation. All readings were done several times to check
> for consistency. Getting to 1% precision with a QM-1 is stretching the
> limits of the machine and operator.
>
> All glues were allowed to cure about 10 hours. The silicone might need
> longer to complete its cure, based on my experience with the stuff.
>
> It is possible that there might be effects at high levels of RF that
> don't show up in these low-signal measurements.
>
> What I've learned from my experience is that the inductance of these
> toroids can change by 5% or more just by bumping the turns together or
> apart. If they're wound loose, ordinary handling in the field will
> cause them to change how they perform in your rig MUCH MORE than any
> effect caused by the glues I tested. Therefore I recommend you glue
> down at least one side of each toroid after you're sure you've got them
> adjusted right. It can even be suggested that extra glue on the top
> sides might make these coils more durable - but I haven't done this on
> mine.
>
> Comments on adjusting your filters: You should do your adjustments
> with the supply voltage you plan to run with mostly. It's also very
> important to monitor the current to the rig. Since you're changing the
> impedance seen by the PA, you can vary both power output and
> efficiency, sometimes one at the expense of the other. It's a judgment
> call, but you need to watch both numbers. You don't win if you get 7
> watts out of the rig and then burn out the mosfets! 5 watts with 12
> volts is possible for the ATS-3A.
>
> The reason no one can tell you how to hit optimum is that the
> inductance varies several percent just by how you wind the turns. The
> cores have some small variation lot-to-lot. The capacitors have
> tolerances also. It all factors together to determine the match. In
> the end you may have to play with adding and subtracting capacitance as
> well as squeezing or spreading turns. You can take a small cap, a few
> pf, and experiment to see if adding capacitance helps or hurts. Go
> easy, be patient, and don't leave the rig keyed too long - it's trial-
> and-error and a multivariable network, but you really can optimize

> these filters. Think "nice compromise".
>
> In the end you really should check the rig's spectral purity, if you
> have access to a spectrum analyzer. As long as your changes are small,
> you should be OK. Large changes are NOT required, and the rig should
> be clean as long as you're not messing around with the basic design
> numbers for these filters.
>

1921. Re: [AT_Sprint] Re: Mounting Toroids with glue and Q changes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-26 14:07:22 UTC
From: Mark Brueggemann
Topic: 1905 Message: 1921

--- radio_kx0r <careyfuller@...> wrote:

> I just ran Q measurements of 4 toroids using different glues.

Excellent job on the testing and report.

Mark K5LXP
Albuquerque, NM

1922. Re: Mounting Toroids with glue and Q changes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-26 14:25:23 UTC
From: radio_kx0r
Topic: 1905 Message: 1922

--- In AT_Sprint@yahoogroups.com, Mark Brueggemann <qrq_cw@...> wrote:
>
>
> --- radio_kx0r <careyfuller@...> wrote:
>
> > I just ran Q measurements of 4 toroids using different glues.
>
> Excellent job on the testing and report.
>
>
>
> Mark K5LXP
> Albuquerque, NM
>

Thanks Mark -

I just noticed I forgot to mention the frequency of the Q
measurements -all Q measurements were at 7.9 Mhz.

Carey
KX0R

1923. Re: Mounting Toroids with glue and Q changes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-26 16:06:11 UTC
From: radio_kx0r
Topic: 1905 Message: 1923

--- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@...>
wrote:
>
> --- In AT_Sprint@yahoogroups.com, Mark Brueggemann <qrq_cw@> wrote:
> >
> >
> > --- radio_kx0r <careyfuller@> wrote:
> >
> > > I just ran Q measurements of 4 toroids using different glues.
> >
> > Excellent job on the testing and report.
> >
> >
> >
> > Mark K5LXP
> > Albuquerque, NM
> >
>
> Thanks Mark -
>
> I just noticed I forgot to mention the frequency of the Q
> measurements -all Q measurements were at 7.9 Mhz.
>
> Carey
> KX0R
>

This morning I realized I could test the toroids' Q's at 13.8 Mhz,
the max I can use and still achieve resonance. All five toroids
measure Q's of about 195-200 at 13.8 Mhz, including the control
toroid, which has no glue. So we have no significant degradation due
to the glues at the higher frequency. We should be OK on 20M.

Carey
KX0R

1924. which PDA for PocketDigi?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-26 17:39:35 UTC
From: John Shadle
Topic: 1924 Message: 1924

Hi all. Just wondered if anyone had recommendations for a decent PDA to run PocketDigi. Hoping to pick something up on eBay for use with the ATS-3B.

All I have now is a Palm Zire m150, which I'm pretty sure won't work with PocketDigi (which requires Windows CE).

Thanks.
-john W4PAH

1925. Re: Mounting Toroids with glue and Q changes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-26 19:37:23 UTC
From: ve3wmb
Topic: 1905 Message: 1925

--- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@...> wrote:

Wow .. great work thanks. I'll keep this posting as I am sure that
this question will come up again.

Thanks again ... I appreciate all of the effort you put into this.

Cheers,

Michael VE3WMB

> Michael,
>
> I just ran Q measurements of 4 toroids using different glues. Here's
> the short version followed by the technical details:
>
> I wound five T68-6 cores with 26 turns of #22 wire. All measured about
> 3.75 uH on my AADE L/C Meter II. I measured the inductance and Q of
> each inductor before applying glues to four of them. The fifth was
> left as a control.
>
> Here are the results:
>
> Coil #1 Q w/o glue 207 control Q later w/o glue 207
> Coil #2 Q w/o glue 207 5 minute epoxy Q with epoxy 206
> Coil #3 Q w/o glue 208 hot glue Q with hot glue 206
> Coil #4 Q w/o glue 204 Duco cement Q with Duco 204
> Coil #5 Q w/o glue 211 GE silicone 1 Q with silicone 208
>
> Inductances with glue all measured within 1% of initial values on the
> AADE L/C meter. Any inductance changes were beyond the accuracy of the
> meter and methods, and not significant.
>
> The changes in Q are so small that I think you can use any of these
> glues to mount your toroids. I used a large amount of glue on both
> sides of the full windings for these tests. Much less glue will be
> required to secure a toroid to a board. In practice any reduction in Q
> will be negligible.
>

1926. Q vs Wire Gauge

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-27 17:04:03 UTC
From: radio_kx0r
Topic: 1926 Message: 1926

Since we're supposed to use #30 wire for many of the PA filter toroids (LF-1 and LF-2) in the ATS-3B, according to the manual, I remembered that we used #26 in the ATS-3A; I wondered if the smaller wire affects the Q enough to measure.

I did a quick test to see how much the Q changes when we use #30 vs #26 magnet wire. With a T30-2 core, I wound 16 turns of #26 and made an inductor measuring about 1.7 uH. I wound another one with #30 and measured it to compare:

T30-2 16T #26 1.3uH Q=94 @ 7.9 MHz
T30-2 16T #30 1.3uH Q=88 @ 7.9 Mhz

T30-2 16T #26 1.3 uH Q=110 @ 18 Mhz
T30-2 16T #30 1.3 uH Q=103 @ 18 Mhz

Then I removed the #30 winding, replaced it with #26, matched the inductance by crowding the turns, and measured about the same as above - verifying that the variations are due to the wire.

I did similar tests on large T68-6 cores and I found a 15% reduction in Q with 26 turns of #30 vs #22.

This is no big deal. The performance of the ATS-3B rig may not change enough to be measured if we change the gauge from #30 to the larger #26. Nevertheless, I think #30 is harder to work with than #26, so I'm planning to wind #26 on all the toroids where it will fit...unless someone like Steve says I'm nuts. #26 is easier to wind, strip, and adjust.

The #30 should be just fine...no one should rewind their toroids...I'm just obsessed because I can measure the difference with my Q meter. The toroid with #32 still has to be done with #32 in order to fit the turns.

This is what happens when you go to a hamfest and walk out with a Q meter.

1927. First QSO

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-28 09:33:57 UTC
From: Manfred Reinhardt
Topic: 1927 Message: 1927

Just finished ATS3B
first QSO with the magic ATS3B on 40m I5SFU
vy 72 to all
Fred

1928. SMT questions

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-30 01:35:07 UTC
From: John
Topic: 1928 Message: 1928

I bought a 3B kit a few weeks ago, but have been hesitant to start building it. I tried soldering one of the "741" resistors and found it very difficult to pin down with my 1/32" tip. I've built a dozen or so Heathkits, a dozen or so years ago (age here is 60+), and always thought I could build them better than the average ham. (My HW-8, built in the 70's still works fine). But I don't think I can build this 3B with a soldering iron.

So I'll give this "reflow" methodology a try. I read the info at the Cash Olsen web site and some of the comments here, but I still have a few questions: (sorry if I missed any obvious answers already posted)

1. Why do we need the hot-plate? Doesn't the hot-air gun put out enough heat by itself to quickly heat up a local area and flow the solder?
2. Why heat up the entire board? Won't that tend to undo stuff you've already flowed?
3. How do you do the 2-side boards? Again I see a risk of undoing some previously flowed work.
4. Can I use my Chicago-brand workshop heat gun? It has a 3/4" nozzle attachment and two heat settings 600 and 1000 watts. Heats stuff up pretty darn fast, but does create some breeze. Will that blow the parts off the board?
5. Can someone recommend a good website for ordering the solder paste?

Thanks for your help,
72
John Day,AF4EX

1929. Re: [AT_Sprint] SMT questions

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-30 01:49:22 UTC
From: Michael Harnage
Topic: 1928 Message: 1929

I will try to answer in line below:

--- John <af4ex.radio@...> wrote:

> 1. Why do we need the hot-plate? Doesn't the hot-air
> gun put out
> enough heat by itself to quickly heat up a local
> area and flow the
> solder?

To follow the recommended temperature profile of the
solder. Although it is not strictly necessary as I
have done some smt work with just the hot air gun.

> 2. Why heat up the entire board? Won't that tend to
> undo stuff
> you've already flowed?

Surface tension will keep the stuff already soldered
in place.

> 3. How do you do the 2-side boards? Again I see a
> risk of undoing
> some previously flowed work.

I place an entire side at a time and flow the entire
board side at the same time. Then flip the board and
place and reflow the other side later.

> 4. Can I use my Chicago-brand workshop heat gun? It
> has a 3/4"
> nozzle attachment and two heat settings 600 and 1000
> watts. Heats
> stuff up pretty darn fast, but does create some
> breeze. Will that
> blow the parts off the board?

I used an Uchida embossing gun (from Michael's Craft
store) and old souce pan on the stove. Kept the nozzle
about 3 inches from the board and only had two of the
0603 resisters move on me. Fixed them with a fine
tipped iron.

> 5. Can someone recommend a good website for ordering
> the solder
> paste?

http://www.zianet.com/erg/ShopSolderPaste.html

1 - $5.00 amount will allow you to do 2 or 3 ATS3B's.

Good luck,

-mike/w1mt

Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

1930. Re: SMT questions

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-30 03:41:26 UTC
From: Garry
Topic: 1928 Message: 1930

John. I just recently started work on mine and found the same thing as you. I think I spent 3 hours and got 5 capacitors soldered in place. I chased those little things all over the board with the soldering iron. Either they stuck to the iron or I trembled and pushed the dang things off the pad when I approached the component. But the heat gun makes all the difference and the solder paste seems to hold the part in place in spite of the airflow.

I havn't been using the warming pad but it seems to me that anyone with an electric range could simply lay a piece of 1/4 steel or heavy aluminum on top of the burner and adjust the burner temperature to accomplish the same thing as the pot warmer.

Once the component has been soldered in place I have had no issues when flipping over the board to do the other side. I suspect that the heat does not penetrate the board quickly enough to affect the components that are on the bottom and even if the solder should get hot enough to melt, the surface tension of the solder will hold it. After all they can't wiegh much more than a flea. HI HI.

I have all the "fleas" soldered now, just have to do the solid state stuff and then the through hole and other miscellaneous as well as the filter boards. I don't know if that method is recommended or not but I just didn't feel I could chance trying to populate the entire board (one side) at once. If you should happen to twitch or stumble you could knock a few of the unsoldered items loose and the thing that struck me was how would I ever distinguish between capacitor values as I don't think they have any markings and they won't fit in my meter to measure them.

Anyhow you will find it a different story once you try that method. I believe just about everyone is getting their solder paste from Cash Olsen and that will be the link already provided.

Good luck

Garry/Ve7ajj

--- In AT_Sprint@yahoogroups.com, "John" <af4ex.radio@...> wrote:
>
> I bought a 3B kit a few weeks ago, but have been hesitant to start
> building it. I tried soldering one of the "741" resistors and found
> it very difficult to pin down with my 1/32" tip. I've built a dozen
> or so Heathkits, a dozen or so years ago (age here is 60+), and
> always thought I could build them better than the average ham. (My
> HW-8, built in the 70's still works fine). But I don't think I can
> build this 3B with a soldering iron.

>
> So I'll give this "reflow" methodology a try. I read the info at
the
> Cash Olsen web site and some of the comments here, but I still have
> a few questions: (sorry if I missed any obvious answers already
> posted)
>
> 1. Why do we need the hot-plate? Doesn't the hot-air gun put out
> enough heat by itself to quickly heat up a local area and flow the
> solder?
> 2. Why heat up the entire board? Won't that tend to undo stuff
> you've already flowed?
> 3. How do you do the 2-side boards? Again I see a risk of undoing
> some previously flowed work.
> 4. Can I use my Chicago-brand workshop heat gun? It has a 3/4"
> nozzle attachment and two heat settings 600 and 1000 watts. Heats
> stuff up pretty darn fast, but does create some breeze. Will that
> blow the parts off the board?
> 5. Can someone recommend a good website for ordering the solder
> paste?
>
> Thanks for your help,
> 72
> John Day,AF4EX
>

1931. Removing enamel from wire for toroids

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-30 04:59:27 UTC
From: km5ty
Topic: 1931 Message: 1931

I've finished by rig check out up to the filters. Everything went well. I built the ATS-3B under
a microscope and that made checking each solder connection very easy. I'm also a fan of the liquid flux for the SMT ICs, the trick is not to use too much and clean it regularly with alcohol.

I'm not sure if I have the toroids soldered in well. I tried to removeth enamel from the wire
using my soldering iron, and it was definately messy. Does anyone have a trick other than a solder pot?

Thanks,

Gary KM5TY

1932. Re: [AT_Sprint] Removing enamel from wire for toroids

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-30 11:03:30 UTC
From: mbhayden
Topic: 1931 Message: 1932
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

1933. Re: [AT_Sprint] Removing enamel from wire for toroids

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-30 11:24:01 UTC
From: Gil Stacy
Topic: 1931 Message: 1933
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

1934. Re: [AT_Sprint] SMT questions

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-30 12:45:02 UTC
From: Gil Stacy
Topic: 1928 Message: 1934
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

1935. Re: SMT questions

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-30 12:51:47 UTC
From: John
Topic: 1928 Message: 1935

Thanks Garry, and Michael, for the advice. I just ordered me some solder paste and will attempt the hot-air method. I plan to use my Chicago heat gun set at 600F and see if it that works by itself, without a hot plate (with a safety net behind the work to catch parts if they fly off :-)

If that doesn't work then I'll get one of those embossing pens from Michael's and a cup warmer from Walgreen.

I'll keep you all posted on the results. Really looking forward to trying out the digital modes with the PocketDigi!

72
AF4EX
--- In AT_Sprint@yahoogroups.com, "Garry" <ve7ajj@...> wrote:
>
> John. I just recently started work on mine and found the same
thing
> as you. I think I spent 3 hours and got 5 capacitors soldered in
> place. I chased those little things all over the board with the
> soldering iron. Either they stuck to the iron or I trembled and
pushed
> the dang things off the pad when I approached the component. But
the
> heat gun makes all the difference and the solder paste seems to
hold
> the part in place in spite of the airflow.
>
> I havn't been using the warming pad but it seems to me that anyone
> with an electric range could simply lay a piece of 1/4 steel or
heavy
> aluminum on top of the burner and adjust the burner temperature to
> accomplish the same thing as the pot warmer.
>
> Once the component has been soldered in place I have had no issues
> when flipping over the board to do the other side. I suspect that
the
> heat does not penetrate the board quickly enough to affect the
> components that are on the bottom and even if the solder should
get
> hot enough to melt, the surface tension of the solder will hold
it.
> After all they can't wiegh much more than a flea. HI HI.
>
> I have all the "fleas" soldered now, just have to do the solid
state

> stuff and then the through hole and other miscellaneous as well as
the
> filter boards. I don't know if that method is recommended or not
but I
> just didn't feel I could chance trying to populate the entire
board
> (one side) at once. If you should happen to twitch or stumble you
> could knock a few of the unsoldered items loose and the thing that
> struck me was how would I ever distinguish between capacitor
values as
> I don't think they have any markings and they won't fit in my
meter to
> measure them.
>
> Anyhow you will find it a different story once you try that
method. I
> believe just about everyone is getting their solder paste from
Cash
> Olsen and that will be the link already provided.
>
> Good luck
>
> Garry/Ve7ajj
>
>
> --- In AT_Sprint@yahoogroups.com, "John" <af4ex.radio@> wrote:
> >
> > I bought a 3B kit a few weeks ago, but have been hesitant to
start
> > building it. I tried soldering one of the "741" resistors and
found
> > it very difficult to pin down with my 1/32" tip. I've built a
dozen
> > or so Heathkits, a dozen or so years ago (age here is 60+), and
> > always thought I could build them better than the average ham.
(My
> > HW-8, built in the 70's still works fine). But I don't think I
can
> > build this 3B with a soldering iron.
> >
> > So I'll give this "reflow" methodology a try. I read the info at
> the
> > Cash Olsen web site and some of the comments here, but I still
have
> > a few questions: (sorry if I missed any obvious answers already
> > posted)
> >
> > 1. Why do we need the hot-plate? Doesn't the hot-air gun put out
> > enough heat by itself to quickly heat up a local area and flow
the

> > solder?
> > 2. Why heat up the entire board? Won't that tend to undo stuff
> > you've already flowed?
> > 3. How do you do the 2-side boards? Again I see a risk of
undoing
> > some previously flowed work.
> > 4. Can I use my Chicago-brand workshop heat gun? It has a 3/4"
> > nozzle attachment and two heat settings 600 and 1000 watts.
Heats
> > stuff up pretty darn fast, but does create some breeze. Will
that
> > blow the parts off the board?
> > 5. Can someone recommend a good website for ordering the solder
> > paste?
> >
> > Thanks for your help,
> > 72
> > John Day,AF4EX
> >
>

1936. Re: SMT questions

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-30 13:00:32 UTC
From: John
Topic: 1928 Message: 1936

"doofus"? Hmm, never heard of that. Just did a Google and found this article by AL7FS, who apparently built one of these for his ATS-2: http://www.al7fs.us/AL7FS5ATSprint2.html

Is this the typical setup?

Looks like you still have to use a soldering iron, but keeps the pieces in place etc.

I'm going to try the hot air first.

Tnx & 72
AF4EX
--- In AT_Sprint@yahoogroups.com, "Gil Stacy" <gilstacy@...> wrote:
>
> John,
> The other alternative to solder paste is use of a "doofus" if you haven't
> tried one.
> Gil NN4CW
>

1937. Re: [AT_Sprint] Re: SMT questions

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-30 13:59:44 UTC
From: Gil Stacy
Topic: 1928 Message: 1937
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

1938. Re: SMT questions

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-30 14:21:31 UTC
From: John
Topic: 1928 Message: 1938

> I use a cast iron skillet on a gas range...
Gil, my XYL would have a fit if she caught me soldering on her stove top! :-) I'm just going to try the heat gun alone and see if I can eliminate the need for a stove.
tnx&72 de AF4EX
--- In AT_Sprint@yahoogroups.com, "Gil Stacy" <gilstacy@...> wrote:
>
> John,
> I use a cast iron skillet on a gas range for preheat. A digital kitchen
> thermometer and experimentation allowed me to find the best setting on the
> stove top.
> Gil
>

1939. Re: SMT questions

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-30 14:39:11 UTC
From: ve3wmb
Topic: 1928 Message: 1939

--- In AT_Sprint@yahoogroups.com, "John" <af4ex.radio@...> wrote:
>
> I bought a 3B kit a few weeks ago, but have been hesitant to start
> building it. I tried soldering one of the "741" resistors and found
> it very difficult to pin down with my 1/32" tip.

John :

For what it's worth .. I just finished building an ATS3A using a soldering iron. I actually found the caps and resistors trickier than the ICs to install as they are so darned small. Some of the tricks I used were a bit of beeswax on the tip of a toothpick (Steve's idea) to move the parts around. I tinned one pad and I used tweezers to steady the part on the board while I reflowed the solder to tack down one side for starters, soldered the opposite pad then touched up the tinned pad. I used a magnifying lamp and built the rig inside a box lid that was about 2 inches deep to keep parts from flying around. I also highly recommend the suggestion of removing only a single part from the carrier at a time. The rig worked first time .. no issues. The trick to using tweezers is to use a very light touch so as to avoid flinging the part across the room at high speed; never to be seen again.

In advance I bought the smallest tip I could find for my Weller soldering station and very fine tipped tweezers.

Michael VE3WMB

P.S. I also tried AE5X's idea of taking an extreme closeup shot of the DDS chip using a digital camera after I soldered the chip to the board. When I uploaded it to my computer I was able to zoom in and visually check the solder connections on all of the pins. Worked like a charm.

1940. Re: SMT questions

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-30 14:55:28 UTC
From: John
Topic: 1928 Message: 1940

Michael,
My 15-minute struggle with a single "741" resistor convinced me that
I'll never get this beast built with a soldering iron. I got it
soldered, but it was really blobby and messy looking.
The flow methods seem to promise an easier and speedier result.
Tnx,
AF4EX
--- In AT_Sprint@yahoogroups.com, "ve3wmb" <mbabineau@...> wrote:
>
> --- In AT_Sprint@yahoogroups.com, "John" <af4ex.radio@> wrote:
> >
> > I bought a 3B kit a few weeks ago, but have been hesitant to
start
> > building it. I tried soldering one of the "741" resistors and
found
> > it very difficult to pin down with my 1/32" tip.
>
> John :
>
> For what it's worth .. I just finished building an ATS3A using a
> soldering iron. I actually found the caps and resistors trickier
than
> the ICs to install as they are so darned small. Some of the tricks
I
> used were a bit of beeswax on the tip of a toothpick (Steve's
idea) to
> move the parts around. I tinned one pad and I used tweezers to
steady
> the part on the board while I reflowed the solder to tack down one
> side for starters, soldered the opposite pad then touched up the
> tinned pad. I used a magnifying lamp and built the rig inside a box
> lid that was about 2 inches deep to keep parts from flying around.
I
> also highly recommend the suggestion of removing only a single part
> from the carrier at a time. The rig worked first time .. no issues.
> The trick to using tweezers is to use a very light touch so as to
> avoid flinging the part across the room at high speed; never to be
> seen again.
>
> In advance I bought the smallest tip I could find for my Weller
> soldering station and very fine tipped tweezers.
>
> Michael VE3WMB
>
> P.S. I also tried AE5X's idea of taking an extreme closeup shot of

the
> DDS chip using a digital camera after I soldered the chip to the
> board. When I uploaded it to my computer I was able to zoom in and
> visually check the solder connections on all of the pins. Worked
like
> a charm.
>

1941. Re: [AT_Sprint] Re: SMT questions

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-30 15:09:34 UTC
From: mbhayden
Topic: 1928 Message: 1941
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

1942. Re: [AT_Sprint] Re: SMT questions

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-30 15:10:24 UTC
From: Gil Stacy
Topic: 1928 Message: 1942
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

1943. Re: SMT questions

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-30 15:50:56 UTC
From: John
Topic: 1928 Message: 1943

>> ... Hanging antenna wire in the trees in the front yard ...
Gil, you're absolutely right, the XYL's just don't seem to understand
the importance of having a good antenna system!
73,AF4EX
--- In AT_Sprint@yahoogroups.com, "Gil Stacy" <gilstacy@...> wrote:
>
> Gil, my XYL would have a fit if she caught me soldering on her stove
> top! :-)
>
> John,
> Certain things are best done when they are not around. Hanging
antenna wire
> in the trees in the front yard comes to mind--just put up another
while
> she's at work.
> 73, Gil
>

1944. Re: [AT_Sprint] Removing enamel from wire for toroids

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-30 17:08:45 UTC
From: Jim Miller
Topic: 1931 Message: 1944

I've found that breaking the surface of the enamel with a bit of sandpaper really makes "solder blob" stripping and tinning much faster.

Rip off about 2sqin of medium grit sandpaper and fold over to pinch the wire in between. Make one or two pinched swipes of the wire to be tinned just to break the surface of the enamel. No need to take it all off. Takes a whole 5 seconds.

Now do the solder blob tinning and it will go much faster than if the enamel was unscuffed.

73

jim ab3cv

1945. RE: [AT_Sprint] Removing enamel from wire for toroids

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-30 20:38:38 UTC
From: Milan
Topic: 1931 Message: 1945

Put enamel wire on the tablet of aspirin (not necessary with
C vitamin Hi)
and hold it in the left hand or someone in the right hand
Hi, with other hand put the hot solderin iron while tablet
begin to melt and pull the wire while force down iron, if it
is necessery do agen.
Milan

> -----Original Message-----
> From: AT_Sprint@yahoogroups.com
> [mailto:AT_Sprint@yahoogroups.com] On Behalf Of Jim Miller
> Sent: 30. oktobar 2007 18:09
> To: AT_Sprint@yahoogroups.com
> Subject: Re: [AT_Sprint] Removing enamel from wire for
toroids
>
> I've found that breaking the surface of the enamel with a
bit
> of sandpaper really makes "solder blob" stripping and
tinning
> much faster.
>
> Rip off about 2sqin of medium grit sandpaper and fold over
to
> pinch the wire in between. Make one or two pinched swipes
of
> the wire to be tinned just to break the surface of the
> enamel. No need to take it all off. Takes a whole 5
seconds.
>
> Now do the solder blob tinning and it will go much faster
> than if the enamel was unscuffed.
>
> 73
>
> jim ab3cv
>
>
>
> Yahoo! Groups Links
>
>
>
>
> __________ NOD32 2627 (20071030) Information __________

>
> This message was checked by NOD32 antivirus system.
> http://www.eset.com
>
>

1946. Re: SMT questions

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-31 02:13:39 UTC
From: Garry
Topic: 1928 Message: 1946

--- In AT_Sprint@yahoogroups.com, "John" <af4ex.radio@...> wrote:
>
> Thanks Garry, and Michael, for the advice. I just ordered me some
> solder paste and will attempt the hot-air method. I plan to use my
> Chicago heat gun set at 600F and see if it that works by itself,
> without a hot plate (with a safety net behind the work to catch
> parts if they fly off :-)
>
> If that doesn't work then I'll get one of those embossing pens from
> Michael's and a cup warmer from Walgreen.
>
> I'll keep you all posted on the results. Really looking forward to
> trying out the digital modes with the PocketDigi!
>

John.

Just a tip for you that might be workable as it was for me. I am doing my build in an aluminum roasting pan (a very cheap thing made of extremely light aluminum). I picked it up at the local Dollar store for a couple of bucks. It has sides about 3 - 3 1/2" high and it has already saved me the loss of a component or two. What I like about it is that it is just so easy to clip an aligator lead to the aluminum and then run a wire from the lead to ground to give me a grounded work surface. Who knows, I could even use it to roast a turkey or something when I finish the ATS3B, that is if I knew how to do that.

73

Garry/Ve7ajj

1947. Re: which PDA for PocketDigi?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-31 02:19:01 UTC
From: kc7fys
Topic: 1924 Message: 1947

I'm watching the list for this issue. By provenance, some funds have
been freed for the acquisition of a palm device at Chez 7J1AWL.
Could some on the list chime in with what specific device you are
using and what you like/dislike about it?
Jonathan

--- In AT_Sprint@yahoogroups.com, John Shadle <shadle@...> wrote:
>
> Hi all. Just wondered if anyone had recommendations for a decent PDA to
> run PocketDigi. Hoping to pick something up on eBay for use with the
ATS-3B.

1948. Re: which PDA for PocketDigi?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-31 02:44:38 UTC
From: Garry
Topic: 1924 Message: 1948

Mine is the Toshiba Pocket PC using windows 2002. I have heard that win2003 is much better but I cannot upgrade this machine to that so cannot confirm. Regardless, this machine does an amazing job with Pocketdigi. I was suitably impressed with the software. I have not used it to transmit yet (so don't know what issues I may find there) but it sure receives just great.

Garry/Ve7ajj

--- In AT_Sprint@yahoogroups.com, "kc7fys" <kc7fys@...> wrote:
>
> I'm watching the list for this issue. By provenance, some funds have
> been freed for the acquisition of a palm device at Chez 7J1AWL.
> Could some on the list chime in with what specific device you are
> using and what you like/dislike about it?
> Jonathan
>
> --- In AT_Sprint@yahoogroups.com, John Shadle <shadle@> wrote:
> >
> > Hi all. Just wondered if anyone had recommendations for a decent
PDA to
> > run PocketDigi. Hoping to pick something up on eBay for use with
the
> ATS-3B.
>

1949. Re: which PDA for PocketDigi?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-31 03:44:40 UTC
From: kc7fys
Topic: 1924 Message: 1949

--- In AT_Sprint@yahoogroups.com, "Garry" <ve7ajj@...> wrote:
>
> Mine is the Toshiba Pocket PC using windows 2002.

May I ask the model number?
Thanks,
Jonathan

1950. Re: SMT questions

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-31 15:20:28 UTC
From: John
Topic: 1928 Message: 1950

> ... doing my build in an aluminum roasting pan ...
Garry, down here in Florida (EL98) we don't worry much about static electricity. Very high humidity most of the time.
For organizing my work area I use those carboard shells from the 24-can soda pop cases: one to hold the parts dishes and another for the soldering work and tools. But I'm worried that my heat gun will blow the parts off the board, so I'm scouting around for some kind of netting for a backdrop.
73 de AF4EX
--- In AT_Sprint@yahoogroups.com, "Garry" <ve7ajj@...> wrote:
>
> --- In AT_Sprint@yahoogroups.com, "John" <af4ex.radio@> wrote:
> >
> > Thanks Garry, and Michael, for the advice. I just ordered me some
> > solder paste and will attempt the hot-air method. I plan to use my
> > Chicago heat gun set at 600F and see if it that works by itself,
> > without a hot plate (with a safety net behind the work to catch
> > parts if they fly off :-)
> >
> > If that doesn't work then I'll get one of those embossing pens from
> > Michael's and a cup warmer from Walgreen.
> >
> > I'll keep you all posted on the results. Really looking forward to
> > trying out the digital modes with the PocketDigi!
> >
>
> John.
>
> Just a tip for you that might be workable as it was for me. I am
> doing my build in an aluminum roasting pan (a very cheap thing made of
> extremely light aluminum). I picked it up at the local Dollar store
> for a couple of bucks. It has sides about 3 - 3 1/2" high and it has
> already saved me the loss of a component or two. What I like about it
> is that it is just so easy to clip an aligator lead to the aluminum
> and then run a wire from the lead to ground to give me a grounded
work

> surface. Who knows, I could even use it to roast a turkey or
something
> when I finish the ATS3B, that is if I knew how to do that.
>
> 73
>
> Garry/Ve7ajj
>

1951. SMT

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-10-31 15:48:52 UTC
From: sm0xg
Topic: 1951 Message: 1951

I have now finished the soldering on the main board but not yet installed L3.

I am now 77 and have to use +4 reading glasses. I used a 200-dollar hobby binocular microscope on which I mounted a plastic tray with walls and did all the soldering with a thin tipped iron in the way Steve recommended. Only tools a finger nail to hold down and a pocket knife to put each part in position. I used a thinner solder 34 SWG .23 mm so for each solder point I had to feed a sizeable length of solder and under the microscope you can clearly see what happens. I newer had to use the solder wick. Garry's tip on using an aluminum roasting pan seems right.

So bad eyesight should not prevent us from playing with SMT!

73 de Karl / SM0XG

1952. Re: which PDA for PocketDigi?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-01 01:19:52 UTC
From: Garry
Topic: 1924 Message: 1952

I believe it is the E740. (can't see anything on to tell me) I have had it for about three years, bought it used from a friend and seldom ever use it except to play solitaire and read the odd E-book. Until Pocket digi that is.

I also have a very nifty little folding keyboard for it that opens to approximate the size of a laptop keyboard which will be very handy for PSK and other digital modes.

Garry/Ve7ajj

--- In AT_Sprint@yahoogroups.com, "kc7fys" <kc7fys@...> wrote:
>
> --- In AT_Sprint@yahoogroups.com, "Garry" <ve7ajj@> wrote:
> >
> > Mine is the Toshiba Pocket PC using windows 2002.
>
> May I ask the model number?
> Thanks,
> Jonathan
>

1953. Re: SMT questions

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-01 03:17:16 UTC
From: radio_kx0r
Topic: 1928 Message: 1953

--- In AT_Sprint@yahoogroups.com, "John" <af4ex.radio@...> wrote:
I just soldered the less-populated side of the ATS-3B board using Cash Olson solder paste, candle warmer/heat spreader, and embossing hot air tool. It went perfectly. It took me over an hour to identify and place the parts - I even measured some of them to be sure what they were. The 0603's looked terrible prior to heating, crooked and smeared with paste, but then they just popped into place when the solder liquified. This is the most amazing thing to see!

I think that a 600 watt heat gun may be too serious, but it may work as long as you don't get too close or go too fast. It's too much heat and too much air if you get too close. The key to the hot air method is to get just enough heat underneath, and then add just enough heat above, without the temperature going too high and ruining the board or the parts. The 320 watt embossing tools have just enough heat and just enough airflow without either being too strong. The result is that you can get pretty close to the reflow temperature profile recommended by the component manufacturers.

You start with the hot air tool about 3 or 4 inches above the preheated board. You take your time and bring the tool closer and closer, while moving it gently around a zone of the board. You end up about 1-1/2 inches from the board, still moving, and the paste melts - you give it some time, maybe 10 or 15 seconds, to be sure it's all melted - then you move over a bit, and that zone melts pretty fast, because it's been getting hot air. Once you've melted the whole area, just back the nozzle away to 4 inches, and keep it moving - you're lowering the temperature gradually, like the profiles in the data books. You just gradually move it away for a minute or two, then turn off the tool, and after another minute or so remove the board from the preheater (candle warmer/heat spreader).

As others have said, once you do this, you will be changed forever. I think now that we all can do 0603's if we can get the paste mostly on the pad and get the part reasonably close to where it belongs. The amount of paste is small but very non-critical - and you don't need near the accuracy of positioning what you do when you solder the ends one at a time. The paste doesn't hold the parts tightly, but it's has enough hold that they don't jostle while you're positioning the other parts, as long as you don't touch them. The easiest parts are those little 3-legged devices - they just position themselves perfectly.

Now I have to start the busy side of the board...

KX0R
Carey Fuller

> > ... doing my build in an aluminum roasting pan ...
> Garry, down here in Florida (EL98) we don't worry much about static
> electricity. Very high humidity most of the time.
> For organizing my work area I use those carboard shells from the 24-
> can soda pop cases: one to hold the parts dishes and another for
the
> soldering work and tools. But I'm worried that my heat gun will
blow
> the parts off the board, so I'm scouting around for some kind of
> netting for a backdrop.
> 73 de AF4EX
> --- In AT_Sprint@yahoogroups.com, "Garry" <ve7ajj@> wrote:
> >
> > --- In AT_Sprint@yahoogroups.com, "John" <af4ex.radio@> wrote:
> > >
> > > Thanks Garry, and Michael, for the advice. I just ordered me
> some
> > > solder paste and will attempt the hot-air method. I plan to use
> my
> > > Chicago heat gun set at 600F and see if it that works by
itself,
> > > without a hot plate (with a safety net behind the work to catch
> > > parts if they fly off :-)
> > >
> > > If that doesn't work then I'll get one of those embossing pens
> from
> > > Michael's and a cup warmer from Walgreen.
> > >
> > > I'll keep you all posted on the results. Really looking forward
> to
> > > trying out the digital modes with the PocketDigi!
> > >
> >
> > John.
> >
> > Just a tip for you that might be workable as it was for me. I am
> > doing my build in an aluminum roasting pan (a very cheap thing
> made of
> > extremely light aluminum). I picked it up at the local Dollar
> store
> > for a couple of bucks. It has sides about 3 - 3 1/2" high and it
> has
> > already saved me the loss of a component or two. What I like
> about it
> > is that it is just so easy to clip an aligator lead to the
> aluminum
> > and then run a wire from the lead to ground to give me a grounded
> work

> > surface. Who knows, I could even use it to roast a turkey or
> something
> > when I finish the ATS3B, that is if I knew how to do that.
> >
> > 73
> >
> > Garry/Ve7ajj
> >
>

1954. Re: SMT questions

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-01 15:36:18 UTC
From: John
Topic: 1928 Message: 1954

KX0R wrote:
> The 0603's looked terrible prior to heating,
> crooked and smeared with paste,
> but then they just popped into place
> when the solder liquified.
> This is the most amazing thing to see!
Sounds like magic! Certainly sends the message that hot-air is the way to go (though my hat's off to SM0XG and the others who have succeeded with the soldering iron).

W1MT answered my question about the need for pre-heating, which prompted me to do some further research. Here's a nice Wikipedia article which further helped me understand why it's necessary to slowly heat up the work:
http://en.wikipedia.org/wiki/Reflow_soldering
<http://en.wikipedia.org/wiki/Reflow_soldering>

Also the place where I ordered the solder paste has a good writeup on this too:

http://www.zianet.com/erg/R276.pdf <http://www.zianet.com/erg/R276.pdf>

I'm still planning to use my Chicago heat-gun (which can put out 630F-1000F degrees, not watts as I previously wrote) (You can get these at Harbor Freight for $10, when they're on sale:
http://www.harborfreight.com/cpi/ctaf/displayitem.taf?Itemnumber=35776
<http://www.harborfreight.com/cpi/ctaf/displayitem.taf?Itemnumber=35776>
) I've got attachment set which will narrow the nozzle to 3/4".

My original thinking was that I should apply "max heat" quickly, melt the solder and get out as quick as possible to avoid heating up other stuff. I now realize that this is TOTALLY WRONG and will create thermal stress which can do a lot of damage.

The correct way (according to Kester) seems to require allowing at least 3-4 minutes of slow heating to bring everything up to a max of 225C (437F), at which point the magic described above should happen.

So I went to Harbor Freight yesterday and bought me a Centech infrared laser thermometer (Not exactly cheap, I paid $59 for this thing, but you can find them cheaper on line:
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=170141763311
<http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=170141763311>),
which can read up to 1000F within a degree or so. Has a nice flexible head which can be pointed very precisely with the help of an on-board spotting laser. I don't have the solder paste yet, but I tried heating up the board and held the heat gun back far enough so that I could watch

the on-board temperature rise up to about 400F. Really an amazing
gadget!

Starting to feel a bit more confident about SMT now (and not worried
about blowing parts away anymore, hi)

HTH&73,

John,AF4EX

--- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@...> wrote:
>
> --- In AT_Sprint@yahoogroups.com, "John" af4ex.radio@ wrote:
> I just soldered the less-populated side of the ATS-3B board using
> Cash Olson solder paste, candle warmer/heat spreader, and embossing
> hot air tool. It went perfectly. It took me over an hour to
> identify and place the parts - I even measured some of them to be
> sure what they were. The 0603's looked terrible prior to heating,
> crooked and smeared with paste, but then they just popped into place
> when the solder liquified. This is the most amazing thing to see!
>
> I think that a 600 watt heat gun may be too serious, but it may work
> as long as you don't get too close or go too fast. It's too much
> heat and too much air if you get too close. The key to the hot air
> method is to get just enough heat underneath, and then add just
> enough heat above, without the temperature going too high and ruining
> the board or the parts. The 320 watt embossing tools have just
> enough heat and just enough airflow without either being too strong.
> The result is that you can get pretty close to the reflow temperature
> profile recommended by the component manufacturers.
>
> You start with the hot air tool about 3 or 4 inches above the
> preheated board. You take your time and bring the tool closer and
> closer, while moving it gently around a zone of the board. You end
> up about 1-1/2 inches from the board, still moving, and the paste
> melts - you give it some time, maybe 10 or 15 seconds, to be sure
> it's all melted - then you move over a bit, and that zone melts
> pretty fast, because it's been getting hot air. Once you've melted
> the whole area, just back the nozzle away to 4 inches, and keep it
> moving - you're lowering the temperature gradually, like the profiles
> in the data books. You just gradually move it away for a minute or
> two, then turn off the tool, and after another minute or so remove
> the board from the preheater (candle warmer/heat spreader).
>
> As others have said, once you do this, you will be changed forever.
> I think now that we all can do 0603's if we can get the paste mostly
> on the pad and get the part reasonably close to where it belongs.
> The amount of paste is small but very non-critical - and you don't
> need near the accuracy of positioning what you do when you solder the
> ends one at a time. The paste doesn't hold the parts tightly, but
> it's has enough hold that they don't jostle while you're positioning

> the other parts, as long as you don't touch them. The easiest parts
> are those little 3-legged devices - they just position themselves
> perfectly.
>
> Now I have to start the busy side of the board...
>
> KX0R
> Carey Fuller
>
> > > ... doing my build in an aluminum roasting pan ...
> > Garry, down here in Florida (EL98) we don't worry much about static
> > electricity. Very high humidity most of the time.
> > For organizing my work area I use those carboard shells from the 24-
> > can soda pop cases: one to hold the parts dishes and another for
> the
> > soldering work and tools. But I'm worried that my heat gun will
> blow
> > the parts off the board, so I'm scouting around for some kind of
> > netting for a backdrop.
> > 73 de AF4EX
> > --- In AT_Sprint@yahoogroups.com, "Garry" <ve7ajj@> wrote:
> > >
> > > --- In AT_Sprint@yahoogroups.com, "John" <af4ex.radio@> wrote:
> > > >
> > > > Thanks Garry, and Michael, for the advice. I just ordered me
> > some
> > > > solder paste and will attempt the hot-air method. I plan to use
> > my
> > > > Chicago heat gun set at 600F and see if it that works by
> itself,
> > > > without a hot plate (with a safety net behind the work to catch
> > > > parts if they fly off :-)
> > > >
> > > > If that doesn't work then I'll get one of those embossing pens
> > from
> > > > Michael's and a cup warmer from Walgreen.
> > > >
> > > > I'll keep you all posted on the results. Really looking forward
> > to
> > > > trying out the digital modes with the PocketDigi!
> > > >
> > >
> > > John.
> > >
> > > Just a tip for you that might be workable as it was for me. I am
> > > doing my build in an aluminum roasting pan (a very cheap thing
> > made of
> > > extremely light aluminum). I picked it up at the local Dollar
> > store
> > > for a couple of bucks. It has sides about 3 - 3 1/2" high and it

> > has
> > > already saved me the loss of a component or two. What I like
> > about it
> > > is that it is just so easy to clip an aligator lead to the
> > aluminum
> > > and then run a wire from the lead to ground to give me a grounded
> > work
> > > surface. Who knows, I could even use it to roast a turkey or
> > something
> > > when I finish the ATS3B, that is if I knew how to do that.
> > >
> > > 73
> > >
> > > Garry/Ve7ajj
> > >
> >
>

1955. ATS-3B Poetry

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-01 19:15:36 UTC
From: John
Topic: 1928 Message: 1955

> KX0R wrote:
> > The 0603's looked terrible prior to heating,
> > crooked and smeared with paste,
> > but then they just popped into place
> > when the solder liquified.
> > This is the most amazing thing to see!

Just noticed a faint resemblance of KX0R's "verses" above to Carl Sandburg's poem "POOL" (which KX0R has likely never seen). Carey is a fine poet!

POOL
Out of the fire
Came a man sunken
To less than cinders,
A tea-cup of ashes or so.
And I,
The gold in the house,
Writhed into a stiff pool.

-AF4EX

1956. Re: SMT questions

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-01 19:39:53 UTC
From: Garry
Topic: 1928 Message: 1956

That looks like good information John. Thanks for the post. I believe I will modify my solder method when doing the Solid state devices.

73

Garry/Ve7ajj

Here's a nice Wikipedia article which
> further helped me understand why it's necessary to slowly heat up the
> work:
> http://en.wikipedia.org/wiki/Reflow_soldering
> <http://en.wikipedia.org/wiki/Reflow_soldering>
>
> Also the place where I ordered the solder paste has a good writeup on
> this too:
>
> http://www.zianet.com/erg/R276.pdf <http://www.zianet.com/erg/R276.pdf>
>

1957. Re: SMT questions

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-01 19:39:53 UTC
From: Garry
Topic: 1928 Message: 1957

That looks like good information John. Thanks for the post. I
believe I will modify my solder method when doing the Solid state
devices.

73

Garry/Ve7ajj

Here's a nice Wikipedia article which
> further helped me understand why it's necessary to slowly heat up the
> work:
> http://en.wikipedia.org/wiki/Reflow_soldering
> <http://en.wikipedia.org/wiki/Reflow_soldering>
>
> Also the place where I ordered the solder paste has a good writeup on
> this too:
>
> http://www.zianet.com/erg/R276.pdf <http://www.zianet.com/erg/
R276.pdf>
>

1958. Re: SMT questions

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-01 21:36:53 UTC
From: radio_kx0r
Topic: 1928 Message: 1958

--- In AT_Sprint@yahoogroups.com, "John" <af4ex.radio@...> wrote:

John,

The Wikipedia article is great, and it agrees with all the stuff I've ever read in data sheets for components, etc. When we use the candle warmers, hot plates, or frying pans, we're doing the preheat and maybe part of the soak. The hot air can be started from some distance out, so we bring up the temperature over several minutes, effectively completing the soak and going on into the peak reflow temperature.

I finished placing and soldering both sides of my ATS-3B board yeserday and last night, and it went real well. I essentially used the Cash Olson method, except that I modified a candle warmer as discussed in previous posts.

It turns out that the soldering is really easy using the embossing tool. I wasn't far from the thermal profile described in the article you suggested. There was no problem with components on the underside coming loose or moving, because I used pennies to lift the board slightly off the hot heat-spreader surface. I'm running my candle warmer on about 140 VAC, and the heat spreader (aluminum surface, 1/4" thick) is hot enough that water drops dance on the surface as they boil. So there is a nice preheat - I get the candle warmer and spreader hot first; this takes almost an hour; I put the board on the surface and let it sit for about 5 minutes; then I bring in the hot air tool (320W embossing tool) and let it bring the temperature up from 4 or 5 inches away, while keeping it moving. This is the soak - the solder doesn't melt, but the appearance of the paste changes. The Wikipedia article tells what's going on with the solvents and flux during this time. We bring the hot air tool very gradually closer, and we avoid thermal shock. Then the solder melts when we get to the required temperature, and we keep it there for a little while to make sure the hidden areas and thicker metal leads get hot enough to flow. Once all parts of the board are soldered, we gradually move the nozzle higher and higher, keeping it moving, very slowly letting the temperature go down slowly. The last step is to remove the board from the hot plate.

All that stuff is easy. What is hard is actually placing all the components on the busy (dense) side of the board without knocking some of them out of place while you add more and more parts. The solder paste helps to keep them in place, but it seems to dry out or become less tacky after a couple of hours - maybe it has something to do with the altitude and low humidity here in Colorado. By the time

I had all the parts identified and placed, I was getting a little freaked. After all, it was midnight and Halloween.

It's all or nothing, because once all those unmarked capacitors are placed on the paste, if you get tired and have a little accident, say you just brush the board with a sleeve or a tool, you could lose all your work! Then you'd have a horrible puzzle trying to identify a whole buch of unmarked parts all smeared with solder paste! Those of you who have done this know what I mean. You want to do the whole side of the board and get everything soldered, because you don't dare have an accident.

Others have suggested putting the parts on in groups, and this is a possibility, even though it means remelting some of them. The semiconductors are the most fragile, so they should be in the last group, if you try this.

The semiconductors weren't too bad. The AD9834 was a challenge to get lined up - I tacked down two corners and then laid thin "ropes" of paste down each side, right where the leads meet the pads. I only had a couple of little bridges to remove with braid afterwards.

I mounted some of the 8-pin IC's with just paste, but of course I ended up bumping one of them and having to re-do it prior to reflow. I bumped several caps and resistors off their pads, and R1 either got up and walked away, because I never saw it again - or else the Halloween ghosts got it. It just disappeared...gone.

It was real nice to see all those messy little blobs of solder paste turn into nice solder joints when the hot air did the job later. I only had a few spots to touch up - all due to excess or sloppy paste.

The one-part-at-a-time manual soldering method is safer and less stressful than placing one whole side of the board at one time and reflowing it, because your losses are always limited, and you know you're going to get there without a big crisis.

Safer? Consider this - what is the thermal profile of a component that you solder down manually with a hot tip, first one end, then the other. There is an enormous thermal gradient across the tiny part. The capacitors contain microscopic layers of ceramic dielectric, and those layers can crack due to thermal stresses - this is in data books from the capacitor companies. The reliability of the parts may be reduced by thermal shock, even if failure doesn't occur immediately. I worked for a company that had a major reliability problem with chip caps caused by the soldering methods used...we all got educated on thermal profiles and soldering methods.

What saves us is that today's components have been improved for many years, and they can take a lot of abuse. Nevertheless, the hot air methods offer a much better thermal profile than hand soldering. When you touch a hot tip to one end of an 0805 part, that material

goes from about 70F to maybe 700F in less than a second - and the heat has a steep gradient across a very short distance to the other end of the part, which is surely cooler, and may even be already soldered down, in which case it's attached to a heat sink! This increases the gradient even more! Those parts like being brought up to temperature gradually and uniformly, even though they stay hot longer, with the hot air. Also their peak temperature should be much lower than what you give them with a hot iron tip, if you don't use the hot air correctly.

I'll post a photo of my soldered board in the files later tonight. It looks pretty good. I can't say the board works yet though - I just mounted the through-hole parts earlier, and now I want to get outside and forget all these little parts for a while.

The solder paste method is not for everyone...but it works for this kit. If you have any plan to try this, I suggest ordering a Norcal Dummy Load - it's a great practice kit for surface mount - before launching into the ATS-3B:

http://www.norcalqrp.org/ncdummyload.htm

Good luck!

KX0R

> W1MT answered my question about the need for pre-heating, which prompted
> me to do some further research. Here's a nice Wikipedia article which
> further helped me understand why it's necessary to slowly heat up the
> work:
> http://en.wikipedia.org/wiki/Reflow_soldering
> <http://en.wikipedia.org/wiki/Reflow_soldering>
>
> Also the place where I ordered the solder paste has a good writeup on
> this too:
>
> http://www.zianet.com/erg/R276.pdf
<http://www.zianet.com/erg/R276.pdf>
>

>
> HTH&73,
>
> John,AF4EX
>

1959. Re: SMT questions

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-02 20:44:10 UTC
From: John
Topic: 1928 Message: 1959

Carey,
Good write-up. Sounds like either method, solder-iron or reflow,
requires some skill and lots of patience. Good luck on the rest of
the build, hopefully you're be hearing the Morse "8" soon.

I was hoping my solder paster would arrive in the mail today, but no
luck.

72,AF4EX
--- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@...>
wrote:
>
> --- In AT_Sprint@yahoogroups.com, "John" <af4ex.radio@> wrote:
>
> John,
>
> The Wikipedia article is great, and it agrees with all the stuff
I've
> ever read in data sheets for components, etc. When we use the
candle
> warmers, hot plates, or frying pans, we're doing the preheat and
> maybe part of the soak. The hot air can be started from some
> distance out, so we bring up the temperature over several minutes,
> effectively completing the soak and going on into the peak reflow
> temperature.
>
> I finished placing and soldering both sides of my ATS-3B board
> yeserday and last night, and it went real well. I essentially
used
> the Cash Olson method, except that I modified a candle warmer as
> discussed in previous posts.
>
> It turns out that the soldering is really easy using the embossing
> tool. I wasn't far from the thermal profile described in the
article
> you suggested. There was no problem with components on the
underside
> coming loose or moving, because I used pennies to lift the board
> slightly off the hot heat-spreader surface. I'm running my candle
> warmer on about 140 VAC, and the heat spreader (aluminum surface,
> 1/4" thick) is hot enough that water drops dance on the surface as
> they boil. So there is a nice preheat - I get the candle warmer
and
> spreader hot first; this takes almost an hour; I put the board on
the

> surface and let it sit for about 5 minutes; then I bring in the
hot
> air tool (320W embossing tool) and let it bring the temperature up
> from 4 or 5 inches away, while keeping it moving. This is the
soak -
> the solder doesn't melt, but the appearance of the paste changes.
> The Wikipedia article tells what's going on with the solvents and
> flux during this time. We bring the hot air tool very gradually
> closer, and we avoid thermal shock. Then the solder melts when we
> get to the required temperature, and we keep it there for a little
> while to make sure the hidden areas and thicker metal leads get
hot
> enough to flow. Once all parts of the board are soldered, we
> gradually move the nozzle higher and higher, keeping it moving,
very
> slowly letting the temperature go down slowly. The last step is
to
> remove the board from the hot plate.
>
> All that stuff is easy. What is hard is actually placing all the
> components on the busy (dense) side of the board without knocking
> some of them out of place while you add more and more parts. The
> solder paste helps to keep them in place, but it seems to dry out
or
> become less tacky after a couple of hours - maybe it has something
to
> do with the altitude and low humidity here in Colorado. By the
time
> I had all the parts identified and placed, I was getting a little
> freaked. After all, it was midnight and Halloween.
>
> It's all or nothing, because once all those unmarked capacitors
are
> placed on the paste, if you get tired and have a little accident,
say
> you just brush the board with a sleeve or a tool, you could lose
all
> your work! Then you'd have a horrible puzzle trying to identify a
> whole buch of unmarked parts all smeared with solder paste! Those
of
> you who have done this know what I mean. You want to do the whole
> side of the board and get everything soldered, because you don't
dare
> have an accident.
>
> Others have suggested putting the parts on in groups, and this is
a
> possibility, even though it means remelting some of them. The
> semiconductors are the most fragile, so they should be in the last
> group, if you try this.

>
> The semiconductors weren't too bad. The AD9834 was a challenge to
> get lined up - I tacked down two corners and then laid
thin "ropes"
> of paste down each side, right where the leads meet the pads. I
only
> had a couple of little bridges to remove with braid afterwards.
>
> I mounted some of the 8-pin IC's with just paste, but of course I
> ended up bumping one of them and having to re-do it prior to
reflow.
> I bumped several caps and resistors off their pads, and R1 either
got
> up and walked away, because I never saw it again - or else the
> Halloween ghosts got it. It just disappeared...gone.
>
> It was real nice to see all those messy little blobs of solder
paste
> turn into nice solder joints when the hot air did the job later.
I
> only had a few spots to touch up - all due to excess or sloppy
paste.
>
> The one-part-at-a-time manual soldering method is safer and less
> stressful than placing one whole side of the board at one time and
> reflowing it, because your losses are always limited, and you know
> you're going to get there without a big crisis.
>
> Safer? Consider this - what is the thermal profile of a component
> that you solder down manually with a hot tip, first one end, then
the
> other. There is an enormous thermal gradient across the tiny
part.
> The capacitors contain microscopic layers of ceramic dielectric,
and
> those layers can crack due to thermal stresses - this is in data
> books from the capacitor companies. The reliability of the parts
may
> be reduced by thermal shock, even if failure doesn't occur
> immediately. I worked for a company that had a major reliability
> problem with chip caps caused by the soldering methods used...we
all
> got educated on thermal profiles and soldering methods.
>
> What saves us is that today's components have been improved for
many
> years, and they can take a lot of abuse. Nevertheless, the hot
air
> methods offer a much better thermal profile than hand soldering.
> When you touch a hot tip to one end of an 0805 part, that material

> goes from about 70F to maybe 700F in less than a second - and the
> heat has a steep gradient across a very short distance to the
other
> end of the part, which is surely cooler, and may even be already
> soldered down, in which case it's attached to a heat sink! This
> increases the gradient even more! Those parts like being brought
up
> to temperature gradually and uniformly, even though they stay hot
> longer, with the hot air. Also their peak temperature should be
much
> lower than what you give them with a hot iron tip, if you don't
use
> the hot air correctly.
>
> I'll post a photo of my soldered board in the files later
tonight.
> It looks pretty good. I can't say the board works yet though - I
> just mounted the through-hole parts earlier, and now I want to get
> outside and forget all these little parts for a while.
>
> The solder paste method is not for everyone...but it works for
this
> kit. If you have any plan to try this, I suggest ordering a
Norcal
> Dummy Load - it's a great practice kit for surface mount - before
> launching into the ATS-3B:
>
> http://www.norcalqrp.org/ncdummyload.htm
>
> Good luck!
>
> KX0R
>
>
> > W1MT answered my question about the need for pre-heating, which
> prompted
> > me to do some further research. Here's a nice Wikipedia article
> which
> > further helped me understand why it's necessary to slowly heat
up
> the
> > work:
> > http://en.wikipedia.org/wiki/Reflow_soldering
> > <http://en.wikipedia.org/wiki/Reflow_soldering>
> >
> > Also the place where I ordered the solder paste has a good
writeup
> on
> > this too:
> >

> > http://www.zianet.com/erg/R276.pdf
> <http://www.zianet.com/erg/R276.pdf>
> >
>
> >
> > HTH&73,
> >
> > John,AF4EX
> >
>

1960. Just posted some photos

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-05 15:14:14 UTC
From: Randal
Topic: 1960 Message: 1960

I had such a good time building my ATS3-B I couldn't bring myself to hide it in an Altoids tin. So, found a small parts box that didn't have a designated function and stuffed my ATS3-B in there. Now while snooping around the bands I can look at all of those TINY components and remember why I bought a stereo-microscope. Man dose that help these 60 something eyeballs.

This rig is a ton of fun. Making contacts left and right, my KX1 is just sitting on the shelf.
72,

Ran-W1IN

1961. Re: [AT_Sprint] Just posted some photos

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-05 10:15:57 UTC
From: ron
Topic: 1960 Message: 1961

Randal wrote:

>I had such a good time building my ATS3-B I couldn't bring myself to
>hide it in an Altoids tin. So, found a small parts box that didn't
>have a designated function and stuffed my ATS3-B in there. Now while
>snooping around the bands I can look at all of those TINY components
>and remember why I bought a stereo-microscope. Man dose that help
>these 60 something eyeballs.
>
>
>

Pictures! Pictures! (smile)

Ron, wb1hga

1962. Kester Solder Paster- How Old Can You Go?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-05 17:57:29 UTC
From: wi1p@arrl.net
Topic: 1962 Message: 1962

Hello Sprint SMT Guru's,

In my endeavor to get the necessary materials ready for my ATS-3B assembly I have obtained two syringes of OLD, 3 plus years old, Kester solder paste.

The details on the plastic solder paste syringe labels are as follows:

Kester Puremark 202,
Net weight 100 G, Alloy 63/37 85%
MESH -325+500 Lot # 4053021
DOM 05/18/04 VISC. PS.

Kester TYPE 256HA
Net Weight 100G Alloy 63/37 86%
Mesh -325+500 LOT # 4052048
DOM 05/13/04 VISC. PS.

My questions are;

1. Are these too old for use manually in the candle warmer / embossing tool solder flow technique?
2. How old IS too old for this stuff to still be usable?
3. Which is better for this type of application, the 202 or the 256? They both look the same to me.
4. Should I do anything to the paste to make it more flow able or workable if it is usable?
5. Would you recommend buying new stuff to avoid ruining a good project?

Thanks in advance for any assistance.

73,wi1p, Greg

********** See what's new at http://www.aol.com

1963. Re: [AT_Sprint] Kester Solder Paster- How Old Can You Go?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-05 18:53:04 UTC
From: Gil Stacy
Topic: 1962 Message: 1963
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

1964. Re: [AT_Sprint] Kester Solder Paster- How Old Can You Go?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-05 19:53:23 UTC
From: Mark Brueggemann
Topic: 1962 Message: 1964

--- wi1p@... wrote:

> I have obtained two syringes of OLD, 3 plus years old,
> Kester solder paste.
...
> 1. Are these too old for use manually in the candle warmer /
> embossing tool solder flow technique?

There's nothing that goes "bad" per se, but over a period
of time the lead granules will settle out of the flux/carrier
goop. Depending on how much trouble you want to go through
to resurrect it, you could take it out of their syringes,
warm it up in a suitable mixing vessel and mix it up again.
I keep mine in small glass vials for this very reason. I
dab it on the various pads using the stick from a bench swab.

Mark K5LXP
Albuquerque, NM

1965. Newbie to the group with a new kit

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-05 20:03:41 UTC
From: jess gypin
Topic: 1965 Message: 1965
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

1966. Finished LAST band module

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-05 20:22:25 UTC
From: john
Topic: 1966 Message: 1966

What a patience test building the band modules was for me. Fortunately I started with the hard one (the 80m) first. Using a headset magnifier sure helps in keeping things under control.

Made a good number of Sweepstakes Q's over the weekend, but was hampered by a bout of the flu, so my time was limited. I was very impressed how well the rig did.

Now to get it home in the tin I found. Looks like I'll be able to include the board plus the full compliment of band modules in this particular tin (a tin that a wallet came in).

Thanks for the fun kit Steve!
John K5MO

1967. Re: Newbie to the group with a new kit

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-05 20:29:44 UTC
From: Randal
Topic: 1965 Message: 1967

Jess,
You do too have the time. It doesn't have to be finished tonight.
You'll kick yourself if you don't. Just do it. It is easier than you
think. You'll never know unless you start.
72,
Ran

1968. Re: [AT_Sprint] Re: Newbie to the group with a new kit

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-05 20:56:52 UTC
From: john
Topic: 1965 Message: 1968

Hi Jess,
I agree...give it a shot! If you have a good desk magnifier, a soldering iron with a small tip, GOOD tweezers, solder wick, and patience you'll get it done. It goes pretty quickly once you get the hang of it. I'd done a few very minor SMT pieces prior to this, but this was my first significant SMT project.

Apart from losing a couple parts to the Rug Monster, it all went well, and the rig works FB on all bands (Just worked CO8LY on 17m).

Try it...it's just one piece after another!

John K5MO

At 03:29 PM 11/5/2007, Randal wrote:
>Jess,
> You do too have the time. It doesn't have to be finished tonight.
>You'll kick yourself if you don't. Just do it. It is easier than you
>think. You'll never know unless you start.
>72,
>Ran
>
>
>
>
>
>Yahoo! Groups Links
>
>
>

1969. Re: [AT_Sprint] Newbie to the group with a new kit

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-05 22:53:23 UTC
From: mbhayden
Topic: 1965 Message: 1969
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

1970. Re: [AT_Sprint] Newbie to the group with a new kit

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-06 00:11:42 UTC
From: james.rushforth@tesco.net
Topic: 1965 Message: 1970

Hi
Like you I had doubts whether I could build this kit. My background experience includes building a range of add-ons, a home brew synthesised all band QRP TX/RX about 23 years ago and last year, a Small wonder 40m QRP TX/RX. None of these had surface mount devices! Through this site I have picked up lots of tips and finally took the plunge and bought the kit. Here are some comments:
* The rig is up and running on all bands and is an amazing kit
* My eyesight is not wonderful, so I bought a head mounted 3Dmagnifier which comes into use by tilting my head down a degree or two when needed. This together with hand lens to read component values worked really well
* I was attracted by the reflow hot air method, but eventually decided to stick to my thermostatically controlled Weller WHS 40 D soldering iron and soldered parts direct. This worked well and the only problem I encountered was surface mount devices sticking to the end of the iron a couple of occasions. Eventually I used my finger nail to hold them in place while I tacked one end.
* Work in a metal tray. Mine is stainless steel with sides about 2 inches high. It saved me losing parts on a couple of occasions, and had a well round the inside for collecting the fat which was a good place to park the packaged components until needed.
* Some of the resistors are tiny - I dropped one in the tray and was convinced I had lost it, but eventually tracked it down. No chance if it had dropped on the floor or the work bench.
* I worked very slowly and checked every component after soldering with the head magnifier plus hand lens.
* I bought some very fine desoldering braid to remove bridges on the tiny ICs.
* Before I started, I got an old PC board, removed some of surface mount devices, cleaned up the pads and then resoldered them. This was really good practice for someone new to these devices.
* The kit is really well designed. I liked the board mounted sockets which meant that during the setting up phase I wasn't dealing with the normal birds nest of temporary connections; just a temporary antenna connections.
* The RCA antenna socket kept working loose until I added an anti shake washer

So, my advice is go ahead and build the kit, but take your time. Having got it all boxed up I am now looking forward to a winter of QRP on 6 bands!

Jim G3ZPD
---- mbhayden <mbhayden@...> wrote:
> go for it. i was actually amazed and soldering those microscopic little
> smts was easier than i thought it would be. i'm building mine now using a
> combination of hand soldering and the reflow hot air methods. each is pretty
> easy and it it is actually a lot of fun. i built a qbsa and a norcal dummy
> load first.
>
> mike ak3f
>

> On 11/5/07, jess gypin <ontarget1911@...> wrote:
> >
> > I was lucky enough to snag an unbuilt kit. I have the heebie jeebies
> > about building a surface mount kit. I am torn between building the kit,
> > letting someone build it for me, or just trading it for a built kit. I am a
> > QRP builder from way back and have built them all from a tuna tin II to a
> > about 3 K1s so I am not unfamiliar nor skill poor, just don't have the time
> > nor gumption to build it just yet. What do you all think?
> >
> > Jess AE0CW
> >
> >
> >

1971. W1IN: nice idea for band module storage!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-06 02:57:22 UTC
From: kc7fys
Topic: 1971 Message: 1971

http://ph.groups.yahoo.com/group/AT_Sprint/photos/view/e6e8?b=5&m=f&o=0
Nice idea. I have had my band modules kind of kicking around--and
they're not all that sturdy for jarring so much. A simple breadboard
and socket arrangement may be coming up for me, too.
Thanks for the tip.
It's a shame the photo section of this yahoogroup doesn't allow
commenting or notes.
Jonathan KC7FYS

1972. Hey experimenters and kit-builders: what multimeter do you use?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-06 03:05:56 UTC
From: kc7fys
Topic: 1972 Message: 1972

Well, I have started looking at upgrading to a nicer multimeter. I have been using a small, cheap one--basically a glorified battery tester, for too long. I notice several models packed with features under 200$--even many in the 35$ range that I might enjoy years of gentle use from. What do y'all use on your bench? Anything to avoid? Thanks in advance for your replies.
Jonathan KC7FYS/7J1AWL

1973. LED Flashlight

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-06 03:24:24 UTC
From: John Paul
Topic: 1973 Message: 1973

Guys:

I don't usually brag about a product.

I bought a LED flashlight several years ago for FD and we went up to
Black Balsam, Sam's Knob, on the Blue Ridge Parkway in NC. I took the new
LED flashlight and loved it. I hiked with it in the dark, I hung it from
the
inside of my tent and used it all night to read and see my rig with. I have
used it for several outings since then and had it for my personal use too,
for things around the house and for night fishing on the pier and cooking
on the grill. It has worked through thick and thin in the rain, and in the
cold and in the freezing weather.

Well, two weeks ago I participated in the ARCI contest and the thing
finally gave up the ghost and quit. I had to revert to another light and
found that this one was really missed.

I sent it off to the manufacturer last Tuesday. I got it back today.
The bill, NOTHING! Less than a week away and fixed.
They fixed it and put WARRANTY on the bill.

I mean this was four years ago.

Streamlight, in Pennsylvania, fixed it for free and then paid the
postage back to the house.

I put a note in the box when I sent it last week and gave my
email address to tell me how much to send to get it fixed.
I did not get an email reply. I got the flashlight back, fixed.

It is the Yellow, 4AA, 7 LED, light.

Now it is working like new and I am, yes, bragging about
their service.

JohnPaul/AB4PP
Raleigh, NC

1974. Re: [QRP-L] LED Flashlight

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-06 05:31:01 UTC
From: Pete Ferrand
Topic: 1974 Message: 1974

-----Original Message-----
>From: John Paul <jpkeon@...>

>I bought a LED flashlight several years ago for FD and we went up to
>(snip)
>I sent it off to the manufacturer last Tuesday. I got it back today.

Apparently there's a bit of this going around. A couple years ago the very first LED flashlight I ever bought some four or five years previous at a flea market developed two problems: an intermittent switch and the silvery stuff flaking off the reflector.

I had seen at Canadian Tire the flashlight was still being sold by Dorcy, and had a lifetime warranty, so I emailed them in Ohio I think and asked what to do. They emailed me back within hours and said just send it in. Which I did and less than a week later I get back a brand new flashlight with a set of batteries. No charge.

This is, as you found, extremely good service for a commodity item worth less than $15. It's also a yellow, 4AA light.

It's great that some companies realize that keeping an existing customer happy makes much more sense than antagonizing someone who cares enough to actually want to use their product.

It's still working fine, btw, and the new flashlight, although identical in appearance, has a much brighter LED.

73,
-Pete
WB2QLL
Somers, WI

1975. Re: [AT_Sprint] Hey experimenters and kit-builders: what multimeter do you use?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-06 13:49:00 UTC
From: john
Topic: 1972 Message: 1975

I dont think you can go wrong with any kind of Fluke meter. Many nice features, many of which are aimed at meter protection from mis-application. (Try measuring line voltage on the resistance scale of one of the Harbor Freight meters... you'll see what I mean :-)). Sooner or later you WILL do something like this , and when you do, you'll be glad you have a quality meter.

OTOH, the HF meters make great, cheap panel meters for Power Supplies (they were 2.99$ last month on sale).

John K5MO

t 10:05 PM 11/5/2007, you wrote:
>Well, I have started looking at upgrading to a nicer multimeter. I
>have been using a small, cheap one--basically a glorified battery
>tester, for too long. I notice several models packed with features
>under 200$--even many in the 35$ range that I might enjoy years of
>gentle use from. What do y'all use on your bench? Anything to avoid?
>Thanks in advance for your replies.
>Jonathan KC7FYS/7J1AWL
>
>
>
>
>Yahoo! Groups Links
>
>
>

1976. Muscle or human energy?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-07 01:06:27 UTC
From: tf3kx
Topic: 1976 Message: 1976

I am interested in operating my QRP rig, such as an ATS-3, solely on muscle power, that is, only running it with energy that I have produced with my own physical work (may be stored and buffered in a battery)! Are there any suggestions or links on where I can find equipment for this or information?

A couple of additional questions right away...

- Are there any PORTABLE electrical generators available?
- What kind of rechargable batteries would you suggest?

73 - Kristinn, TF3KX

1977. Re: [AT_Sprint] Muscle or human energy?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-07 03:58:36 UTC
From: Hank Greeb
Topic: 1976 Message: 1977

Kristinn

Look at the hand generators used for backup for weather radios, etc.
Also, there are ads for a cycle powered kids video game which is
advertising that "the more you pedal, the longer you can play the game.)

Many years ago during field day two of us hooked two bicycle generators
in series, put a few hundred thousand micro farads of capacitance across
them to store the energy of the pedaling, ran a 12 VDC regulator off it,
and powered a 1 watt VHF transceiver for long enough to make 5 Q's for
the "alternative power" bonus.

I'd say that with current technology you should be able to find many
hand or pedal powered generators with sufficient capacity to run a QRP rig.

I did a Google search for "Hand Powered Generators" and the first thing
which came up was http://www.los-gatos.ca.us/davidbu/pedgen.html

That, and other Google references, might give you some good ideas.

As for batteries, Lithium Polymer batteries are very good, but if money
is a concern, Nickel-Metal Hydride is a good choice.

72/73 de n8xx Hg

tf3kx wrote:
> I am interested in operating my QRP rig, such as an ATS-3, solely on muscle power, that is, only running it with energy that I have produced with my own physical work (may be stored and buffered in a battery)! Are there any suggestions or links on where I can find equipment for this or information?
>
> A couple of additional questions right away...
>
> - Are there any PORTABLE electrical generators available?
> - What kind of rechargable batteries would you suggest?
>
> 73 - Kristinn, TF3KX

1978. Re: Muscle or human energy?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-07 05:05:20 UTC
From: radio_kx0r
Topic: 1976 Message: 1978

--- In AT_Sprint@yahoogroups.com, Hank Greeb <n8xx@...> wrote:

2 or 3 lithium LiPo or LiIon cells will run this rig for a long or longer time, depending on the mAH rating.

I think that for portable work batteries are lighter and more reliable than any kind of muscle power conversion device you're likely to come up with for a reasonable cost. Even a bike generator weighs more than three 18650 LiIon cells, or similar LiPo cells, and those 3 cells will give you 4 or 5 watts of RF and many hours of casual operating. Similar results happen with NiMH cells - they just weigh more, and you need more cells. The ATS rigs are incredibly efficient on battery power.

With any kind of direct mechanical generator you have the problem of voltage regulation and perhaps storage - generators generally require magnets, coils, etc., and these parts are heavy. On the other hand, solar power combined with battery storage makes a lot of sense for this radio - a small panel rated for a watt or two would do the job of collecting enough energy to charge your battery - and the weight isn't bad.

If you don't care about cost, there may be small wind generators available for emergency power. One of those might provide a starting point for direct human power.

It would be hard to operate this rig and send CW while cranking anything, unless you're actually on a bike already...but as those of us who ride real bikes a lot know, bike generators are a real drag, and even on a bike it's more practical to carry storage batteries to run lights. The riders with the big HID lights are using lithium packs.

Carey Fuller
KX0R

>
> Kristinn
>
> Look at the hand generators used for backup for weather radios, etc.
> Also, there are ads for a cycle powered kids video game which is
> advertising that "the more you pedal, the longer you can play the game.)
>
> Many years ago during field day two of us hooked two bicycle generators

> in series, put a few hundred thousand micro farads of capacitance
across
> them to store the energy of the pedaling, ran a 12 VDC regulator
off it,
> and powered a 1 watt VHF transceiver for long enough to make 5 Q's
for
> the "alternative power" bonus.
>
> I'd say that with current technology you should be able to find
many
> hand or pedal powered generators with sufficient capacity to run a
QRP rig.
>
> I did a Google search for "Hand Powered Generators" and the first
thing
> which came up was http://www.los-gatos.ca.us/davidbu/pedgen.html
>
> That, and other Google references, might give you some good ideas.
>
> As for batteries, Lithium Polymer batteries are very good, but if
money
> is a concern, Nickel-Metal Hydride is a good choice.
>
> 72/73 de n8xx Hg
>
> tf3kx wrote:
> > I am interested in operating my QRP rig, such as an ATS-3, solely
on muscle power, that is, only running it with energy that I have
produced with my own physical work (may be stored and buffered in a
battery)! Are there any suggestions or links on where I can find
equipment for this or information?
> >
> > A couple of additional questions right away...
> >
> > - Are there any PORTABLE electrical generators available?
> > - What kind of rechargable batteries would you suggest?
> >
> > 73 - Kristinn, TF3KX
>

1979. Re: Newbie to the group with a new kit

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-07 05:33:23 UTC
From: radio_kx0r
Topic: 1965 Message: 1979

--- In AT_Sprint@yahoogroups.com, "jess gypin" <ontarget1911@...> wrote:
>

Jess,

Most of us here are going to tell you to go for it, if you can figure out how to see the parts, and if you can handle them. Practice makes perfect, or at least good enough. I like high-power reading glasses and a stronger hand magnifier for inspection work. You should plan on spending significant time inspecting your work.

By all means order a Norcal SMT Dummy Load and/or some Tuner Uppers - these are useful, easy, low-cost, surface-mount projects that will give you practice and confidence. The Dummy Load provides a convenient way to measure QRP RF power and to check any other wattmeters you may have.

I don't recommend the hot air method as a first-time surface mount way to go. I did my ATS-3A with hand soldering every joint, and I just finished the 3B using the Cash Olson hot air method. Placing the parts with solder paste requires considerable control and patience, it's an all-or-nothing game until you see everything melt. You have to be incredibly careful not to mess up the placement of all the parts as you add more and more parts. The ATS-3B is pretty dense on one side. I would do the paste method again though. The big advantage of the one-part-at-a-time soldering is that you can do just a few at a time, not get too stressed, and take your time until you get rolling.

This is one of the most satisfying kits ever produced. Once you get the rig running, it's nothing short of miraculous. You will be as proud of yourself and what you have learned as you will be impressed with all the hard work that has gone into the design, the upgrades, and the firmware.

Last night I had a 25 minute ragchew on 40M with a station in VA, and he it seemed like it went well for the other guy as well as me...otherwise it would have been over sooner. I don't even have the 3B in a case yet. Amazing.

If you get it outdoors, into the field, you have another set of thrills coming. When the sunspots return, we're all going to be amazed at what these radios will do.

Practice and then go for it.

72/73
KX0R

> I was lucky enough to snag an unbuilt kit. I have the heebie jeebies
about
> building a surface mount kit. I am torn between building the kit,
letting
> someone build it for me, or just trading it for a built kit. I am a
QRP
> builder from way back and have built them all from a tuna tin II to a
about
> 3 K1s so I am not unfamiliar nor skill poor, just don't have the time
nor
> gumption to build it just yet. What do you all think?
>
> Jess AE0CW
>

1980. Re: Hey experimenters and kit-builders: what multimeter do you use?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-07 05:40:01 UTC
From: radio_kx0r
Topic: 1972 Message: 1980

--- In AT_Sprint@yahoogroups.com, john <johnmb@...> wrote:

I've been pretty happy with the Fluke 77 I bought almost 25 years ago. The newer Flukes are even better. We used a lot of them at a place I use to work at, and we had few problems with them. You really can put them on the ohms scale and stick the probes in the 117 VAC wall socket, and nothing bad happens. Of course, if you try that on the current scale, you'll blow the fuse or worse. You'll do it sooner or later.

KX0R

> I dont think you can go wrong with any kind of Fluke meter. Many nice
> features, many of which are aimed at meter protection from mis-application.
> (Try measuring line voltage on the resistance scale of one of the Harbor
> Freight meters... you'll see what I mean :-)). Sooner or later you WILL
> do something like this , and when you do, you'll be glad you have a quality
> meter.
>
> OTOH, the HF meters make great, cheap panel meters for Power Supplies (they
> were 2.99$ last month on sale).
>
> John K5MO
>
>
>
> t 10:05 PM 11/5/2007, you wrote:
> >Well, I have started looking at upgrading to a nicer multimeter. I
> >have been using a small, cheap one--basically a glorified battery
> >tester, for too long. I notice several models packed with features
> >under 200$--even many in the 35$ range that I might enjoy years of
> >gentle use from. What do y'all use on your bench? Anything to avoid?
> >Thanks in advance for your replies.
> >Jonathan KC7FYS/7J1AWL
> >
> >
> >
> >

> >Yahoo! Groups Links
> >
> >
> >
>

1981. 150 pF Caps in the Crystal Filter

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-07 05:56:20 UTC
From: radio_kx0r
Topic: 1981 Message: 1981

This is really a public question for Steve Weber - I figured a few others might be interested in the answer:

I noticed that the ATS-3B uses three 150 pF capacitors in the crystal filter. I believe the ATS-3A used three 100 pF caps in the same places.

What is the reason for the change, and what are the tradeoffs?

My rig is running now, and I just went through the alignment carefully. I used a scope. When I centered the filter bandpass, I found that my filter has a symmetric double peak, with slightly less sensitivity in the center zone than at the two peaks. The peaks are about 12 to 14 button clicks apart. We're talking a db or so here.

Once the alignment is done, the filter sounds nice in use - I hear no double peak when tuning - the overall receiver passband is narrow, just a few clicks, and the skirts are steep and deep. Unless I make measurements - haven't yet - I'm not sure how this filter compares with the one in my 3A. Both are good. I can hear signals at 0.2 uV with either radio.

Why did the filter change?

Thanks

Carey Fuller
KX0R

1982. Re: 150 pF Caps in the Crystal Filter

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-07 07:06:15 UTC
From: Benny ON7BNY
Topic: 1981 Message: 1982

Interesting question...

I did the calibration last weekend, and also noticed the 2 peaks over abt 12 clicks.
(didn't gave it much thoughts at the time, but going through my notes I saw I had 25 clicks on the 3A)
If the rate hasn't changed (1click = 10Hz on the 3A) this should mean the 3B's filter is half as wide as the one on the 3A... if the skirts have remained the same. but this is only a guess of my part, one should measure/calculate (or wait for an answer from Steve ;-)

regards,

Benny Croonen
on7bny

--- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@...> wrote:
>
> This is really a public question for Steve Weber - I figured a few
> others might be interested in the answer:
>
> I noticed that the ATS-3B uses three 150 pF capacitors in the crystal
> filter. I believe the ATS-3A used three 100 pF caps in the same places.
>
> What is the reason for the change, and what are the tradeoffs?
>
> My rig is running now, and I just went through the alignment
> carefully. I used a scope. When I centered the filter bandpass, I
> found that my filter has a symmetric double peak, with slightly less
> sensitivity in the center zone than at the two peaks. The peaks are
> about 12 to 14 button clicks apart. We're talking a db or so here.
>
> Once the alignment is done, the filter sounds nice in use - I hear no
> double peak when tuning - the overall receiver passband is narrow, just
> a few clicks, and the skirts are steep and deep. Unless I make
> measurements - haven't yet - I'm not sure how this filter compares with
> the one in my 3A. Both are good. I can hear signals at 0.2 uV with

> either radio.
>
> Why did the filter change?
>
> Thanks
>
> Carey Fuller
> KX0R
>

1983. Re: Newbie to the group with a new kit

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-07 07:56:29 UTC
From: kc7fys
Topic: 1965 Message: 1983

Jess,
KX0R and others may not recommend it for self-identified newbs as yourself--but I am a relative newbie myself and had a resoundingly positive experience with the hot air method.
My experience is only my own, and I certainly respect those of others on this project. For my part:

1. It wasn't all-at-once for me at all. You can reheat parts of the board, do one side at a time, even one component at a time using cheap and simple embossing tools. Less than 20 bucks, I mean.

2. My experience with placing parts was a walk in the park. Easy and fun. Any mistakes were simply a matter of wiping off the part and moving it. Even a flipped part AFTER using the air gun and allowing the board to cool was a cinch with a tweezers and a conical air-focussing tip I made from a beer can and scissors.

Skid on in to my photo set if that benefits your process:
http://www.flickr.com/photos/jonathancharles/sets/72157602077258104/

Again, I do not have as much experience in the hobby as many of the more experienced hams who have endorsed the tried-and-true soldering method with a fine-tipped iron. I built the QBSA that way and didn't find it easy. Messes were very hard to extricate myself from--and it still doesn't work right. I wish I had simply air gunned it.

Best of luck with my 2 cents' worth.
Best 73,
Jonathan KC7FYS/7J1AWL

1984. ATS-3B Power Output

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-07 07:49:48 UTC
From: radio_kx0r
Topic: 1984 Message: 1984

Getting 5 watts out of the ATS-3B on several bands is easy, but doing this creates some new issues. So I'm going to tell everyone what I've learned so far, so you'll know what you're in for if you try to max out this radio. First read what Steve says in the manual. He's right about everything related to this topic.

I'll just summarize what I've learned and then post more details as a Word document in the Files section. Those of you who are risk-takers or worse can read the rest there.

When I ran 12.0 volts into my ATS-3B, I was able to get just over 5 watts on 80, 40, 30, and 20M. All I had to do on 80, 30, and 20 was adjust the separation of the turns of LF1 and LF2. On 40M I increased C2F by 150 pF and also adjusted LF1 and LF2. I used #26 wire instead of #30 wire for LF1 and LF2 on all modules except 80M, because it's easier to work with, and the Q is a bit higher. I wound all coils with the specified number of turns.

On 17M I'm getting 4.9W, and on 15M I have 4.8W with 12.0V. Once the band modules are adjusted, the current draw rises as you go up in frequency, from .64A key-down on 80M, up to .81A on 15M.

With a 9.0 volt supply, I get 2.8 to 2.9 watts on all bands, with the current increasing from .48A to .58A from 80M to 15M.

With 6.0V, it's 1.2 to 1.3 watts on all bands, and the current runs from .32A up to .40A as the frequency is increased.

There is quite a range of adjustment possible, and getting 4.5W at 12.0V should be easy.

If you go for 5W, your rig will be pushing the current limit - 0.82A - at which the rig trips. All my measurements were into a known good dummy load, and since I want to run into a BLT, I knew that the rig would see some mismatch even at the "Tune" setting of the BLT. Using a 9V supply, the current draw varies about 10 or 15% above or below the normal value when you tune the BLT for a match; this corresponds to an SWR of about 1.4. So you can't adjust a BLT for a match without tripping the rig off, particularly when operating on the higher frequencies and using more than a 10V supply.

You can change the current limit easily; 5.6K in parallel with 680 ohm R47 will permit about 0.9A to flow before overcurrent trip occurs. This might be enough to avoid nuisance tripping when tuning and still have protection when something worse occurs. I think raising the current limit above 1A would be foolish - the limit is there for a reason, and you shouldn't mess with it unless you need a

little extra and understand the risk. Others have suggested tuning the rig up with a low supply voltage, and then kicking it up for operation, but I think you'll need to raise the current limit just to operate reliably with a 12V supply. You'll never be able to tune through a T1 autotuner at full power with the 0.82A limit...I'm not sure that's a good idea anyhow.

This transmitter seems strong and efficient. I did a tough test on every band - running with a 7.5V supply, I operated the rig into reactive mismatches - SWR's of 2:1 or even 3:1 - by mistuning my BLT in the "operate" position. I watched the output on a spectrum analyzer, and I never saw an instability or a parasitic oscillation. The 0.82A current limit didn't trip, but it would have at a higher supply voltage.

On all bands, including the 21 MHz "worst case", with 12V and key-down operation for many seconds, nothing in the radio is getting hot. The 2N7000 mosfets are just warm, and not nearly as warm as the ones in my AST-3A running on 14 Mhz. The little 74AC02 driver IC is getting warm, because it's doing such a great job driving the gates of the final mosfets. The efficiency of the ATS-3B at 21 Mhz is as high as that of the ATS-3A at 14 Mhz, probably because the new driver IC works better. On the lower frequencies you can hardly tell that the transmitter has been on, even after many seconds of key-down at full power....everything is just slightly warm.

The only thing I've found to worry about is the voltage swing on the final mosfet drains. For some reason I'm seeing 50V p-p on 17 and 15M, but only 30 to 40V p-p on the lower frequencies. I found that I had to use a very short 2 cm ground on the scope probe to have any confidence in this measurement. Steve mentions this voltage swing in the manual, and it's good that zener D4 is there - I think you really need this diode if you plan to run the rig on 12V. I may be imagining it, but I think my D4 is getting a bit warm on 15M at full power - just enough to feel after keying for a few seconds.

The PA seems more robust and more efficient than what we had in the ATS-3A. The increased gate drive and the current limit protection are great improvements. I think this final should be fine for sustained digital operation with a 9V supply.

The keying shaping has been greatly improved compared to the previous version. The rise and fall times are 2 to 2.5 mS, and they don't change much as the supply voltage varies from 5.5V to 12.0V. The keying sounds solid, fairly hard, but the signal is free of significant clicks. The new keying circuit is simple and effective - thanks Steve!

I'll write some more details and post in the FILES section soon, but this is the main stuff.

Boy am I amazed and delighted with this rig!

72/73

Carey Fuller
KX0R

1985. Muscle or human energy? - Clarification

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-07 13:11:52 UTC
From: tf3kx
Topic: 1976 Message: 1985

I get the point - batteries are much easier to handle and travel with
than a mechanical generator.

My idea is, however, to start my own challenge where I would
accumulate QSO's that are made totally with my own energy - as an
alternative to solar, wind or commercial energy. Now, that means I
could for that matter charge up efficient batteries, such as LiPo,
using some mechanical charger at home or on a bike, and then tap this
energy off the batteries while operating. Starting with discharged
batteries, I could charge them up to a useful level and from then on
claim that I made all those contacts, across countries and
continents, with my own muscle power!

So I would need a suitable generator(s). Portability would be nice,
but is not a top priority. Then I would need batteries that are well
suited to be charged up with such generators. If the generator
voltage output is highly variable, and the duration of charging
sessions may vary - possibly only a few minutes at a time, I would
need batteries that are well suited for this.

73 - Kristinn, TF3KX

--- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@...>
wrote:
>
> --- In AT_Sprint@yahoogroups.com, Hank Greeb <n8xx@> wrote:
>
> 2 or 3 lithium LiPo or LiIon cells will run this rig for a long or
> longer time, depending on the mAH rating.
>
> I think that for portable work batteries are lighter and more
> reliable than any kind of muscle power conversion device you're
> likely to come up with for a reasonable cost. Even a bike
generator
> weighs more than three 18650 LiIon cells, or similar LiPo cells,
and
> those 3 cells will give you 4 or 5 watts of RF and many hours of
> casual operating. Similar results happen with NiMH cells - they
just
> weigh more, and you need more cells. The ATS rigs are incredibly
> efficient on battery power.
>
> With any kind of direct mechanical generator you have the problem
of
> voltage regulation and perhaps storage - generators generally
require

> magnets, coils, etc., and these parts are heavy. On the other
hand,
> solar power combined with battery storage makes a lot of sense for
> this radio - a small panel rated for a watt or two would do the job
> of collecting enough energy to charge your battery - and the weight
> isn't bad.
>
> If you don't care about cost, there may be small wind generators
> available for emergency power. One of those might provide a
starting
> point for direct human power.
>
> It would be hard to operate this rig and send CW while cranking
> anything, unless you're actually on a bike already...but as those
of
> us who ride real bikes a lot know, bike generators are a real drag,
> and even on a bike it's more practical to carry storage batteries
to
> run lights. The riders with the big HID lights are using lithium
> packs.
>
> Carey Fuller
> KX0R
>
> >
> > Kristinn
> >
> > Look at the hand generators used for backup for weather radios,
> etc.
> > Also, there are ads for a cycle powered kids video game which is
> > advertising that "the more you pedal, the longer you can play the
> game.)
> >
> > Many years ago during field day two of us hooked two bicycle
> generators
> > in series, put a few hundred thousand micro farads of capacitance
> across
> > them to store the energy of the pedaling, ran a 12 VDC regulator
> off it,
> > and powered a 1 watt VHF transceiver for long enough to make 5
Q's
> for
> > the "alternative power" bonus.
> >
> > I'd say that with current technology you should be able to find
> many
> > hand or pedal powered generators with sufficient capacity to run
a
> QRP rig.
> >

> > I did a Google search for "Hand Powered Generators" and the first
> thing
> > which came up was http://www.los-gatos.ca.us/davidbu/pedgen.html
> >
> > That, and other Google references, might give you some good ideas.
> >
> > As for batteries, Lithium Polymer batteries are very good, but if
> money
> > is a concern, Nickel-Metal Hydride is a good choice.
> >
> > 72/73 de n8xx Hg
> >
> > tf3kx wrote:
> > > I am interested in operating my QRP rig, such as an ATS-3,
solely
> on muscle power, that is, only running it with energy that I have
> produced with my own physical work (may be stored and buffered in a
> battery)! Are there any suggestions or links on where I can find
> equipment for this or information?
> > >
> > > A couple of additional questions right away...
> > >
> > > - Are there any PORTABLE electrical generators available?
> > > - What kind of rechargable batteries would you suggest?
> > >
> > > 73 - Kristinn, TF3KX
> >
>

1986. Re: [AT_Sprint] Re: Newbie to the group with a new kit

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-07 14:35:21 UTC
From: jess gypin
Topic: 1965 Message: 1986
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

1987. Re: [AT_Sprint] Re: Newbie to the group with a new kit

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-07 14:36:02 UTC
From: jess gypin
Topic: 1965 Message: 1987
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

1988. Re: Newbie to the group with a new kit

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-07 19:57:48 UTC
From: radio_kx0r
Topic: 1965 Message: 1988

--- In AT_Sprint@yahoogroups.com, "jess gypin" <ontarget1911@...>
wrote:

Jess,

With that many rigs built, the ATS should go together pretty well.
The component count isn't huge, and the only problem is that the
parts are tiny.

I use the OHR WM-2 wattmeter. It is pleasant to use. I calibrated
mine against several schottky diode detectors connected to known good
50 ohm loads. That's essentially how the Norcal load works - it's an
accurate 50 ohm load with a SMT schottky detector built in; you just
attach a DVM and read your power off a graph. Cheap and reasonably
accurate. For a few bucks, it's a great surface mount practice kit,
whether you need it or not, especially if you decide to try the hot
air reflow we're buzzing about.

I think you may have to go to one of the professional HP RF power
meters if you want more accuracy. Or just use a scope and your dummy
load, if you can verify the calibration at RF. Whatever method you
use, verify that your load is REALLY 50 ohms resistive at the
frequency you're working with. This includes any cables, adapters,
etc. I use an MFJ-259 analyzer for this, and it has revealed many
small errors I was previously unaware of. Many loads have an RF
error of 10% or more if measured with cables.

The manual for the ATS-3B was in the "FILES" section of this group
site last time I looked.

Good luck

Carey Fuller
KX0R

> Thanks for the pointers. I am not new to radio building, just that
my sight
> is failing a bit and I am not sure about the patience that I would
have to
> build this. I am also a gunsmith and my time is very limited as to
what I
> can do and cannot do with a lot of the "spare" time that I have. I
have
> built pretty much all of the kits out there. The most challenging
so far was
> the Ms Mosquito from the DL QRP club. Some of the coiled on that
rig were

> unbelievable. Steve "Melt Solder" actually stepped in and helped me
get that
> one running. I had one of the coils mounted backwards. I don't need
a dummy
> load, I have one of those. What I could use is a nice low power QRP
power
> meter. Is there another one out there besides the OHR kit? How
about a QRP
> tuner? Perhaps one that would fit in the Altoids tin along with the
rig? I
> am not a big fan of an Altoids tin and may just hog one out on the
mill out
> of a solid block of aluminum. Is there a manual or QST article on
line for
> this rig? Almost seems like a "mini" Sierra. I have build one or
more of the
> following
>
> K1s - 3
> K2s - 3
> KX1 - 2
> OHR400 - 1
> OHR500 - 1
> SW-40 - 3
> Norcal Cascade - 1
> NC40- 1
> And tons of others. If you have an OHR400 or OHR 500 laying around
that you
> are not using, is broken, excess to your needs, please let me know.
That was
> one of the first QRP rigs that I built and I would LOVE to have
another one
> but not for the full retail price. I also built, yes this is true,
the
> number 5 A&A engineering QRP rig for 30 meters. Kept if for years,
but sold
> it to someone that had an A&A collection. I am also trying to get a
small
> assortment of bugs going to. I don't want anything expensive, just
usable. I
> have a Champion that I am giving some love right now and have it
running,
> and would even be willing to try one of the Japanese bugs? JDL?
>
> Anyway, I ramble.
>
> Jess AE0CW <><
>
>
> On 11/7/07, kc7fys <kc7fys@...> wrote:

> >
> > Jess,
> > KX0R and others may not recommend it for self-identified newbs as
> > yourself--but I am a relative newbie myself and had a resoundingly
> > positive experience with the hot air method.
> > My experience is only my own, and I certainly respect those of
others
> > on this project. For my part:
> >
> > 1. It wasn't all-at-once for me at all. You can reheat parts of
the
> > board, do one side at a time, even one component at a time using
cheap
> > and simple embossing tools. Less than 20 bucks, I mean.
> >
> > 2. My experience with placing parts was a walk in the park. Easy
and
> > fun. Any mistakes were simply a matter of wiping off the part and
> > moving it. Even a flipped part AFTER using the air gun and
allowing
> > the board to cool was a cinch with a tweezers and a conical
> > air-focussing tip I made from a beer can and scissors.
> >
> > Skid on in to my photo set if that benefits your process:
> >
http://www.flickr.com/photos/jonathancharles/sets/72157602077258104/
> >
> > Again, I do not have as much experience in the hobby as many of
the
> > more experienced hams who have endorsed the tried-and-true
soldering
> > method with a fine-tipped iron. I built the QBSA that way and
didn't
> > find it easy. Messes were very hard to extricate myself from--and
it
> > still doesn't work right. I wish I had simply air gunned it.
> >
> > Best of luck with my 2 cents' worth.
> > Best 73,
> > Jonathan KC7FYS/7J1AWL
> >
> >
> >
>

1989. Re: Muscle or human energy? - Clarification

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-07 20:11:10 UTC
From: radio_kx0r
Topic: 1976 Message: 1989

--- In AT_Sprint@yahoogroups.com, "tf3kx" <kristinn1@...> wrote:

Kristinn,

OK, if you're going to charge your batteries with human power at home, I suggest you get an old bicycle, mount it rigidly so it's stationary, and figure out a way to connect a generator to the back wheel. A small automobile generator could be arranged to run off the back wheel with a belt, or even off the tire. You would ride this like an exercise bike - just make sure it's solid so you can put out your power safely.

Others have done this for Field Day. Some have kept stations on the air for hours. These were much larger rigs than the ATS.

If you're in pretty good shape, you may be able to generate 50 or even 100 watts. Professional cyclists can put out hundreds of watts for sustained periods. Even if you get only 10 watts, that would be enough to charge up your battery for lots of QSO's.

Proving that you generated most of the energy yourself is easy - just discharge the battery to its recommended low voltage point with a resistor. Lithium batteries should generally not go below 3.0V per cell. Other batteries have published specs. The charge with your personal power.

KX0R

>
> I get the point - batteries are much easier to handle and travel
with
> than a mechanical generator.
>
> My idea is, however, to start my own challenge where I would
> accumulate QSO's that are made totally with my own energy - as an
> alternative to solar, wind or commercial energy. Now, that means I
> could for that matter charge up efficient batteries, such as LiPo,
> using some mechanical charger at home or on a bike, and then tap
this
> energy off the batteries while operating. Starting with discharged
> batteries, I could charge them up to a useful level and from then
on
> claim that I made all those contacts, across countries and
> continents, with my own muscle power!
>
> So I would need a suitable generator(s). Portability would be
nice,

> but is not a top priority. Then I would need batteries that are
well
> suited to be charged up with such generators. If the generator
> voltage output is highly variable, and the duration of charging
> sessions may vary - possibly only a few minutes at a time, I would
> need batteries that are well suited for this.
>
> 73 - Kristinn, TF3KX
>
> --- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@>
> wrote:
> >
> > --- In AT_Sprint@yahoogroups.com, Hank Greeb <n8xx@> wrote:
> >
> > 2 or 3 lithium LiPo or LiIon cells will run this rig for a long
or
> > longer time, depending on the mAH rating.
> >
> > I think that for portable work batteries are lighter and more
> > reliable than any kind of muscle power conversion device you're
> > likely to come up with for a reasonable cost. Even a bike
> generator
> > weighs more than three 18650 LiIon cells, or similar LiPo cells,
> and
> > those 3 cells will give you 4 or 5 watts of RF and many hours of
> > casual operating. Similar results happen with NiMH cells - they
> just
> > weigh more, and you need more cells. The ATS rigs are incredibly
> > efficient on battery power.
> >
> > With any kind of direct mechanical generator you have the problem
> of
> > voltage regulation and perhaps storage - generators generally
> require
> > magnets, coils, etc., and these parts are heavy. On the other
> hand,
> > solar power combined with battery storage makes a lot of sense
for
> > this radio - a small panel rated for a watt or two would do the
job
> > of collecting enough energy to charge your battery - and the
weight
> > isn't bad.
> >
> > If you don't care about cost, there may be small wind generators
> > available for emergency power. One of those might provide a
> starting
> > point for direct human power.
> >
> > It would be hard to operate this rig and send CW while cranking

> > anything, unless you're actually on a bike already...but as those
> of
> > us who ride real bikes a lot know, bike generators are a real
drag,
> > and even on a bike it's more practical to carry storage batteries
> to
> > run lights. The riders with the big HID lights are using lithium
> > packs.
> >
> > Carey Fuller
> > KX0R
> >
> > >
> > > Kristinn
> > >
> > > Look at the hand generators used for backup for weather radios,
> > etc.
> > > Also, there are ads for a cycle powered kids video game which
is
> > > advertising that "the more you pedal, the longer you can play
the
> > game.)
> > >
> > > Many years ago during field day two of us hooked two bicycle
> > generators
> > > in series, put a few hundred thousand micro farads of
capacitance
> > across
> > > them to store the energy of the pedaling, ran a 12 VDC
regulator
> > off it,
> > > and powered a 1 watt VHF transceiver for long enough to make 5
> Q's
> > for
> > > the "alternative power" bonus.
> > >
> > > I'd say that with current technology you should be able to find
> > many
> > > hand or pedal powered generators with sufficient capacity to
run
> a
> > QRP rig.
> > >
> > > I did a Google search for "Hand Powered Generators" and the
first
> > thing
> > > which came up was http://www.los-gatos.ca.us/davidbu/pedgen.html
> > >
> > > That, and other Google references, might give you some good
ideas.

> > >
> > > As for batteries, Lithium Polymer batteries are very good, but
if
> > money
> > > is a concern, Nickel-Metal Hydride is a good choice.
> > >
> > > 72/73 de n8xx Hg
> > >
> > > tf3kx wrote:
> > > > I am interested in operating my QRP rig, such as an ATS-3,
> solely
> > on muscle power, that is, only running it with energy that I have
> > produced with my own physical work (may be stored and buffered in
a
> > battery)! Are there any suggestions or links on where I can find
> > equipment for this or information?
> > > >
> > > > A couple of additional questions right away...
> > > >
> > > > - Are there any PORTABLE electrical generators available?
> > > > - What kind of rechargable batteries would you suggest?
> > > >
> > > > 73 - Kristinn, TF3KX
> > >
> >
>

1990. Human power

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-08 00:28:46 UTC
From: Steven Weber
Topic: 1984 Message: 1990

I picked up a small crank LED flashlight at Wal-Mart today ($9.95, made by Garrity - they have a web site, <www.garritylites.com>) One reason I got it was it had a DC output jack labled "5V". I found a plug for the jack and it puts out a little over 6 volts with no load. Starting with a 100 ohm load and working lower, I found it will produce about 5 V with a 22 ohm load, or an output current of about 220 ma. Not too bad. I think you could actually charge a battery in a reasonable amount of time with this. Or at least keep one topped off.

Of course, I had to take it apart. Not too hard to do, but there are a couple of hidden screws. Inside is a plastic gear box assembly connected to a small DC motor labled 6V. Its a type commonly found in CD players. There is also a small circuit board with a 1N4007 bridge rectifier off the motor, a small filter cap, a power transistor, a diode and a resistor. Also a 3.6V 80 mHr Ni-MH battery, two switches and the power jack. Looks like the power transistor drives the LED lamps.

This gizzmo might work out even better than the solar charger for keeping my PDA running on the trail. Espcially since I lost the solar charger! Put it on the roof of my car one afternoon, as it was in the sun. You can guess what happened later that evening....

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

1991. Re: Muscle or human energy?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-08 00:59:49 UTC
From: ve3wmb
Topic: 1976 Message: 1991

Kristinn :

Freeplay has a hand generator that is designed to provide 14v of
charging capability, targetted mostly for Cellphones, Ipods etc.
This might meet your needs, see the link below:

http://www.freeplayenergy.com/products/portable-power/mobile/freecharge12v

Michael VE3WMB

P.S. I just bought one of their EyeMax Weather Band radios (AM/FM/Wx)
that has a built-in crank for charging as well as a small Solar Cell
and it even doubles as an LED flashlight! The Receiver works very well
and seems to be very well constructed.

--- In AT_Sprint@yahoogroups.com, "tf3kx" <kristinn1@...> wrote:
>
> I am interested in operating my QRP rig, such as an ATS-3, solely on
> muscle power, that is, only running it with energy that I have produced
> with my own physical work (may be stored and buffered in a battery)!
> Are there any suggestions or links on where I can find equipment for
> this or information?
>
> A couple of additional questions right away...
>
> - Are there any PORTABLE electrical generators available?
> - What kind of rechargable batteries would you suggest?
>
> 73 - Kristinn, TF3KX
>

1992. Re: 150 pF Caps in the Crystal Filter

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-08 03:29:40 UTC
From: radio_kx0r
Topic: 1981 Message: 1992

--- In AT_Sprint@yahoogroups.com, "Benny ON7BNY" <on7bny@...> wrote:
Benny,

Today I measured the bandwidth of both the ATS-3A and the ATS-3B receivers. I did it this way:

Crystal oscillator source (Norcal Tuner-Upper), set of RF attenuators, HP400D AC VTVM connected to headphone jack; HP606A generator used to measure input levels.

Set the RF input at several levels near -90 dbm, stepped the receiver through a set of 50 Hz steps, and recorded the audio output of the receiver. I found that near -80 dbm, AGC is working, so the signal level must be set lower so that AGC effects don't change the curves. I got several sets of data and plotted the curves by hand. The resulting curves include both the IF selectivity of the crystal filter, plus the additional peaking from the audio section.

The bottom line is that both receivers have very similar selectivity curves. The -3db points are about 150 Hz apart. The -B looks a bit flatter and maybe a little wider than 150 Hz at -3B down. Both receivers have the -30 db points about 450 Hz apart. The curves are real pretty, almost symmetric, with no double peaks or other artifacts.

These receivers have ideal selectivity curves for CW operating with weak signals in the presence of stronger signals close by. They sound great, and I can't tell much difference between the two receivers when I listen to CW signals.

I have no way of measuring below about -40 db down from the peak, because the AGC action alters the curve when you run the input signal up; also you can't measure below a certain level due to the noise floor. Both receivers have a noise output of about 1 mV RMS using my setup, on 80M, with the inputs connected to 50 ohms.

The AGC action is very strong - the audio output of my ATS-3A is essentially flat - it doesn't increase - above about -82 dbm, with the signal in the center of the passband. My ATS-3B levels out at -85 dbm; it also measures 3 db more output than the ATS-3A, for the same input, when measured with lower-level signals. These measurements are for 40M.

I still hope Steve will comment of the 150 pF caps vs the older 100 pF caps in the crystal filters.

These are both excellent filters, and it's nice to see why the
receivers perform so well. Such nice performance from a few
inexpensive parts! Lots of good decisions here.

72/73
Carey Fuller
KX0R

> Interesting question...
>
> I did the calibration last weekend, and also noticed the 2 peaks
over
> abt 12 clicks.
> (didn't gave it much thoughts at the time, but going through my
notes
> I saw I had 25 clicks on the 3A)
> If the rate hasn't changed (1click = 10Hz on the 3A) this should
mean
> the 3B's filter is half as wide as the one on the 3A... if the
skirts
> have remained the same. but this is only a guess of my part, one
> should measure/calculate (or wait for an answer from Steve ;-)
>
>
> regards,
>
> Benny Croonen
> on7bny
>
>
> --- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@>
> wrote:
> >
> > This is really a public question for Steve Weber - I figured a
few
> > others might be interested in the answer:
> >
> > I noticed that the ATS-3B uses three 150 pF capacitors in the
> crystal
> > filter. I believe the ATS-3A used three 100 pF caps in the same
> places.
> >
> > What is the reason for the change, and what are the tradeoffs?
> >
> > My rig is running now, and I just went through the alignment
> > carefully. I used a scope. When I centered the filter bandpass,
I
> > found that my filter has a symmetric double peak, with slightly
> less
> > sensitivity in the center zone than at the two peaks. The peaks
> are
> > about 12 to 14 button clicks apart. We're talking a db or so

here.
> >
> > Once the alignment is done, the filter sounds nice in use - I
hear
> no
> > double peak when tuning - the overall receiver passband is
narrow,
> just
> > a few clicks, and the skirts are steep and deep. Unless I make
> > measurements - haven't yet - I'm not sure how this filter
compares
> with
> > the one in my 3A. Both are good. I can hear signals at 0.2 uV
> with
> > either radio.
> >
> > Why did the filter change?
> >
> > Thanks
> >
> > Carey Fuller
> > KX0R
> >
>

1993. Re: 150 pF Caps in the Crystal Filter

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-08 05:10:45 UTC
From: radio_kx0r
Topic: 1981 Message: 1993

--- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@...>
wrote:

Boy am I stupid! I just noticed the note at the bottom of the ATS-3A
schematic that says C4-C8 changed to 150 pf, etc. So the crystal
filters in the -A and -B are essentially the same - no wonder the
curves look alike. Duh...

No need for Steve to answer this one...

KX0R

>
> --- In AT_Sprint@yahoogroups.com, "Benny ON7BNY" <on7bny@> wrote:
> Benny,
>
> Today I measured the bandwidth of both the ATS-3A and the ATS-3B
> receivers. I did it this way:
>
> Crystal oscillator source (Norcal Tuner-Upper), set of RF
> attenuators, HP400D AC VTVM connected to headphone jack; HP606A
> generator used to measure input levels.
>
> Set the RF input at several levels near -90 dbm, stepped the
receiver
> through a set of 50 Hz steps, and recorded the audio output of the
> receiver. I found that near -80 dbm, AGC is working, so the signal
> level must be set lower so that AGC effects don't change the
curves.
> I got several sets of data and plotted the curves by hand. The
> resulting curves include both the IF selectivity of the crystal
> filter, plus the additional peaking from the audio section.
>
> The bottom line is that both receivers have very similar
selectivity
> curves. The -3db points are about 150 Hz apart. The -B looks a
bit
> flatter and maybe a little wider than 150 Hz at -3B down. Both
> receivers have the -30 db points about 450 Hz apart. The curves
are
> real pretty, almost symmetric, with no double peaks or other
> artifacts.
>
> These receivers have ideal selectivity curves for CW operating with
> weak signals in the presence of stronger signals close by. They
> sound great, and I can't tell much difference between the two

> receivers when I listen to CW signals.
>
> I have no way of measuring below about -40 db down from the peak,
> because the AGC action alters the curve when you run the input
signal
> up; also you can't measure below a certain level due to the noise
> floor. Both receivers have a noise output of about 1 mV RMS using
my
> setup, on 80M, with the inputs connected to 50 ohms.
>
> The AGC action is very strong - the audio output of my ATS-3A is
> essentially flat - it doesn't increase - above about -82 dbm, with
> the signal in the center of the passband. My ATS-3B levels out at -
> 85 dbm; it also measures 3 db more output than the ATS-3A, for the
> same input, when measured with lower-level signals. These
> measurements are for 40M.
>
> I still hope Steve will comment of the 150 pF caps vs the older 100
> pF caps in the crystal filters.
>
> These are both excellent filters, and it's nice to see why the
> receivers perform so well. Such nice performance from a few
> inexpensive parts! Lots of good decisions here.
>
> 72/73
> Carey Fuller
> KX0R
>
>
>
>
>

1994. Re: [AT_Sprint] Re: 150 pF Caps in the Crystal Filter

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-08 16:38:03 UTC
From: Steven Weber
Topic: 1981 Message: 1994

>I still hope Steve will comment of the 150 pF caps vs the older 100
>pF caps in the crystal filters.
>
Basically, I thought the filter sounded a little too wide with 100p caps so
I used 150 to make it a little narrower.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

1995. Tuner for 80m-15m?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-08 17:06:50 UTC
From: John
Topic: 1995 Message: 1995

[Still waiting for my solder paste, so reading up on antenna tuners].

Is there an "ideal" portable/QRP tuner for the ATS-3B that will
cover all six 3B bands and handle reasonably "random" antennas?

I have K0XR's writeup on the BLT, but am concerned that it does not
cover 80m and also seems to have problems with antennas far from
resonance. (I plan to use the tuner on balcony railings, downspouts,
etc that might be reactive).

If the BLT is redesigned to cover 80m will it still work for 15m?

I'd like to keep the balanced line output for running TV feedline to
a 40/80m loop antenna that I'm planning to build.

Has anybody tried the SLT with the 3B? Does it cover 80m and handle
random antennas well? (i.e. overcome the 3B's shutdown detector)

Another tuner I've read about is the ZM-4.
http://www.qrpproject.de/UK/ZM4UK.html ,but apparently not used
much. Has anyone tried this one?

Thanks for any feedback.
-AF4EX

1996. Re: ATS-3B Power Output

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-08 17:11:10 UTC
From: John
Topic: 1984 Message: 1996

Carey,
Great writeup, will be very useful when I get to this part of the
build. Keep them coming!
Tnx&72,
AF4EX
--- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@...>
wrote:
>
> Getting 5 watts out of the ATS-3B on several bands is easy, but
doing
> this creates some new issues. So I'm going to tell everyone what
> I've learned so far, so you'll know what you're in for if you try
to
> max out this radio. First read what Steve says in the manual.
He's
> right about everything related to this topic.
>
> I'll just summarize what I've learned and then post more details
as a
> Word document in the Files section. Those of you who are risk-
takers
> or worse can read the rest there.
>
> When I ran 12.0 volts into my ATS-3B, I was able to get just over
5
> watts on 80, 40, 30, and 20M. All I had to do on 80, 30, and 20
was
> adjust the separation of the turns of LF1 and LF2. On 40M I
> increased C2F by 150 pF and also adjusted LF1 and LF2. I used #26
> wire instead of #30 wire for LF1 and LF2 on all modules except
80M,
> because it's easier to work with, and the Q is a bit higher. I
wound
> all coils with the specified number of turns.
>
> On 17M I'm getting 4.9W, and on 15M I have 4.8W with 12.0V. Once
the
> band modules are adjusted, the current draw rises as you go up in
> frequency, from .64A key-down on 80M, up to .81A on 15M.
>
> With a 9.0 volt supply, I get 2.8 to 2.9 watts on all bands, with
the
> current increasing from .48A to .58A from 80M to 15M.
>
> With 6.0V, it's 1.2 to 1.3 watts on all bands, and the current

runs
> from .32A up to .40A as the frequency is increased.
>
> There is quite a range of adjustment possible, and getting 4.5W at
> 12.0V should be easy.
>
> If you go for 5W, your rig will be pushing the current limit -
0.82A -
> at which the rig trips. All my measurements were into a known
good
> dummy load, and since I want to run into a BLT, I knew that the
rig
> would see some mismatch even at the "Tune" setting of the BLT.
Using
> a 9V supply, the current draw varies about 10 or 15% above or
below
> the normal value when you tune the BLT for a match; this
corresponds
> to an SWR of about 1.4. So you can't adjust a BLT for a match
> without tripping the rig off, particularly when operating on the
> higher frequencies and using more than a 10V supply.
>
> You can change the current limit easily; 5.6K in parallel with 680
> ohm R47 will permit about 0.9A to flow before overcurrent trip
> occurs. This might be enough to avoid nuisance tripping when
tuning
> and still have protection when something worse occurs. I think
> raising the current limit above 1A would be foolish - the limit is
> there for a reason, and you shouldn't mess with it unless you need
a
> little extra and understand the risk. Others have suggested
tuning
> the rig up with a low supply voltage, and then kicking it up for
> operation, but I think you'll need to raise the current limit just
to
> operate reliably with a 12V supply. You'll never be able to tune
> through a T1 autotuner at full power with the 0.82A limit...I'm
not
> sure that's a good idea anyhow.
>
> This transmitter seems strong and efficient. I did a tough test
on
> every band - running with a 7.5V supply, I operated the rig into
> reactive mismatches - SWR's of 2:1 or even 3:1 - by mistuning my
BLT
> in the "operate" position. I watched the output on a spectrum
> analyzer, and I never saw an instability or a parasitic
oscillation.
> The 0.82A current limit didn't trip, but it would have at a higher
> supply voltage.

>
> On all bands, including the 21 MHz "worst case", with 12V and key-
> down operation for many seconds, nothing in the radio is getting
> hot. The 2N7000 mosfets are just warm, and not nearly as warm as
the
> ones in my AST-3A running on 14 Mhz. The little 74AC02 driver IC
is
> getting warm, because it's doing such a great job driving the
gates
> of the final mosfets. The efficiency of the ATS-3B at 21 Mhz is
as
> high as that of the ATS-3A at 14 Mhz, probably because the new
driver
> IC works better. On the lower frequencies you can hardly tell
that
> the transmitter has been on, even after many seconds of key-down
at
> full power....everything is just slightly warm.
>
> The only thing I've found to worry about is the voltage swing on
the
> final mosfet drains. For some reason I'm seeing 50V p-p on 17 and
> 15M, but only 30 to 40V p-p on the lower frequencies. I found
that I
> had to use a very short 2 cm ground on the scope probe to have any
> confidence in this measurement. Steve mentions this voltage swing
in
> the manual, and it's good that zener D4 is there - I think you
really
> need this diode if you plan to run the rig on 12V. I may be
> imagining it, but I think my D4 is getting a bit warm on 15M at
full
> power - just enough to feel after keying for a few seconds.
>
> The PA seems more robust and more efficient than what we had in
the
> ATS-3A. The increased gate drive and the current limit protection
> are great improvements. I think this final should be fine for
> sustained digital operation with a 9V supply.
>
> The keying shaping has been greatly improved compared to the
previous
> version. The rise and fall times are 2 to 2.5 mS, and they don't
> change much as the supply voltage varies from 5.5V to 12.0V. The
> keying sounds solid, fairly hard, but the signal is free of
> significant clicks. The new keying circuit is simple and
effective -
> thanks Steve!
>
> I'll write some more details and post in the FILES section soon,

but
> this is the main stuff.
>
> Boy am I amazed and delighted with this rig!
>
> 72/73
>
> Carey Fuller
> KX0R
>

1997. Re: [AT_Sprint] Tuner for 80m-15m?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-08 19:03:20 UTC
From: John A. Evans - N0HJ
Topic: 1995 Message: 1997

I've had fairly good luck with Steve's ALT design (same design in Doug's SLT) with an added inductor for 80m (just twice the highest value inductor as what is in the ALT). You can find the ALT design on Steve's site or the SLT manual from http://qrpkits.com/ .

I've not tried my end fed wire on 17m/15m yet, but once I complete my 3B, I'll build another ALT in a smaller and more friendly form factor and try out different lengths. I "may" also try to build another Fuchs tuner as well, but I'm kinda gun shy as my first attempt wasn't very successful.

72 - john - n0hj

John wrote:
>
> [Still waiting for my solder paste, so reading up on antenna tuners].
>
> Is there an "ideal" portable/QRP tuner for the ATS-3B that will
> cover all six 3B bands and handle reasonably "random" antennas?
>
> I
>

1998. Re: [AT_Sprint] Tuner for 80m-15m?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-08 19:18:11 UTC
From: Hank Greeb
Topic: 1995 Message: 1998

There is no "ideal" antenna coupler. For QRP operation, one needs to look at tradeoffs of size, weight, and losses in the inductors which are used. In the olden daze, before microminiaturization became "the rage" - folks generally used LARGE diameter AIR WOUND coils for most transmitting applications.

Many folks don't consider losses in their antenna matching devices. Whatever you do, please look at the overall efficiency of "smaller" or "more friendly form factor" antenna couplers. The losses in inductors of small physical size, particularly toroids, may amaze anyone who calculates them. Typically I don't use anything but air wound coils for these devices, and, unless I'm going on a lengthy backpack trip (which I haven't done for several years), I'll take along my homebrew tuner with 2" OD air wound coils - made in the dark ages of ~1961. Yes, it's heavy, but the measured loss is less than 1 dB in most situations. I've seen >10 dB loss for some tuners of recent design when folks don't pay attention to the laws of physics. 10db loss between a 5 W rig and the antenna means you're getting only ? watt to the feedline or antenna.

72/73 de n8xx Hg

John A. Evans - N0HJ wrote:

>I've had fairly good luck with Steve's ALT design (same design in Doug's SLT) with an added inductor for 80m (just twice the highest value inductor as what is in the ALT). You can find the ALT design on Steve's site or the SLT manual from http://qrpkits.com/ .
>
> I've not tried my end fed wire on 17m/15m yet, but once I complete my 3B, I'll build another ALT in a smaller and more friendly form factor and try out different lengths. I "may" also try to build another Fuchs tuner as well, but I'm kinda gun shy as my first attempt wasn't very successful.
>
>72 - john - n0hj
>
>John wrote:
>
>
>>[Still waiting for my solder paste, so reading up on antenna tuners].
>>
>>Is there an "ideal" portable/QRP tuner for the ATS-3B that will cover all six 3B bands and handle reasonably "random" antennas?
>>
>
>

1999. Are kits still available?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-08 20:06:09 UTC
From: w9goc
Topic: 2297 Message: 1999

Steve's website says to email first if ordering after September 7.

http://kd1jv.qrpradio.com/ATS3B/ats3b.HTM

Hoping,

Frederick
W9GOC

2000. Re: Are kits still available?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-08 20:21:17 UTC
From: Jim Fraser
Topic: 1999 Message: 2000

Steve's main web page states that there are less than 50 left of the second batch, but that was dated Oct 7. He is often on this group and will answer when he sees your post, or you can just email him directly.

Jim K6JF

--- In AT_Sprint@yahoogroups.com, "w9goc" <w9goc@...> wrote:
>
> Steve's website says to email first if ordering after September 7.
>
> http://kd1jv.qrpradio.com/ATS3B/ats3b.HTM
>
> Hoping,
>
> Frederick
> W9GOC
>

2001. Re: [AT_Sprint] Tuner for 80m-15m?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-08 20:46:43 UTC
From: Gil Stacy
Topic: 1995 Message: 2001
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2002. Re: [AT_Sprint] Tuner for 80m-15m [efficiency]

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-08 21:08:56 UTC
From: n0tu/Steve
Topic: 2002 Message: 2002

I''d be curious if anyone has done any efficiency measurements on the
Emtech ZM2 and Elecraft T1tuners compared to air wound coil ATUs?
Steve/n0tu

On Nov 8, 2007 1:46 PM, Gil Stacy <gilstacy@...> wrote:
>
>
>
> For qrp, I have the Emtech ZM2 and Elecraft T1. I have found the Emtech to
> be more versatile and the resistive bridge helps. The T1 is more compact
> but lacks the bridge.
> 73 Gil NN4CW

2003. WTB: ATS3B Assembled

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-08 21:19:00 UTC
From: n3bj
Topic: 2003 Message: 2003

A local gent would like to get an ATS3B, but doesn't have the skills to build one. It would take me while to get to it due to lack of time, so I'm not much help.... Anyone have an assembled unit they would part with ? He might consider a premium for the assembly.

Thanks,

Alan, N3BJ

2004. Re: [AT_Sprint] Tuner for 80m-15m [efficiency]

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-08 21:39:24 UTC
From: Hank Greeb
Topic: 2002 Message: 2004

The KAT100 was reviewed in QST. Members only article is at
http://www.arrl.org/members-only/prodrev/pdf/pr0501.pdf It is quite
efficient. </members-only/prodrev/pdf/pr0501.pdf> It appears that
Elecraft pays attention to things like toroid losses, etc.

There isn't a review of the Emtech in the ARRL Search. Don't know if
anyone else has done a "hard" review with "hard" loss data.

This type of review seems to be unwelcome in some parts of the QRP
community.

72/73 de n8xx Hg

n0tu/Steve wrote:

>I''d be curious if anyone has done any efficiency measurements on the
>Emtech ZM2 and Elecraft T1tuners compared to air wound coil ATUs?
>Steve/n0tu
>
>On Nov 8, 2007 1:46 PM, Gil Stacy <gilstacy@...> wrote:
>
>
>>For qrp, I have the Emtech ZM2 and Elecraft T1. I have found the Emtech to
>>be more versatile and the resistive bridge helps. The T1 is more compact
>>but lacks the bridge.
>>73 Gil NN4CW
>>

2005. Crank power

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-08 21:41:11 UTC
From: Steven Weber
Topic: 1984 Message: 2005

I've been playing with the LED flashlight with crank charger some more today. I made a couple of mods to it. Added a 5.1V zener across the power jack to keep the voltage from going above that and a couple of .47 F super caps to help keep the voltage steady. Not sure if either of those mods are really needed, but can't hurt, hi.

I can charge my PDA battery, but it sure takes a long time to move it a few percent. Am limited by the charge rate built into the PDA, which isn't fast. I think it discharges at about the same rate that it charges. So, if you use it for an hour, its going to take an hour of cranking to get it back to where it was. Thats a lot of cranking. I think my Zen stone MP3 player has an even slower charge rate. Gonna have to do some timed discharge/charge tests to see if this is going to be a viable option or not.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2006. Re: Crank power

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-08 22:01:25 UTC
From: Bruce Beford
Topic: 1984 Message: 2006

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
>
> I've been playing with the LED flashlight with crank charger some
more
> today. I made a couple of mods to it. Added a 5.1V zener across the
power
> jack to keep the voltage from going above that and a couple of .47
F super
> caps to help keep the voltage steady. Not sure if either of those
mods are
> really needed, but can't hurt, hi.
>
> I can charge my PDA battery, but it sure takes a long time to move
it a few
> percent. Am limited by the charge rate built into the PDA, which
isn't
> fast. I think it discharges at about the same rate that it charges.
So, if
> you use it for an hour, its going to take an hour of cranking to
get it
> back to where it was. Thats a lot of cranking. I think my Zen stone
MP3
> player has an even slower charge rate. Gonna have to do some timed
> discharge/charge tests to see if this is going to be a viable
> option or not.
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com
>

I don't think it will be a good solution, myself. I believe most relatively modern PDAs use 300-400 mA of current. Assume that's at 4 volts (nominal single cell LiPo battery- ok, 3-7 to 4.2 volts, call it 4.0). That's 1.2- 1.6 watts of power consumption.

I believe you said the generator puts out about 200 mA @5 volts, when cranked at a reasonable, steady rate. Thats making power at a 1 watt rate. Take some off for charging inefficiencies, and I think you'll find that you need to crank 1.5 to 2 hours (or more) for each hour of PDA use. Plus, the cheap gears and such that they use in these things are not meant for that kind of continuous duty.

In short, it would comsume less (human) power to carry the small solar panel(s) and/or additional batteries...

72,
Bruce N1RX

2007. Re: [AT_Sprint] Re: Are kits still available?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-08 22:12:44 UTC
From: Steven Weber
Topic: 1999 Message: 2007

I belive I'm sold out as of today. Will I do more? Maybe. When? Not before next year.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2008. Re: [AT_Sprint] Re: Crank power

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-08 22:38:08 UTC
From: Vojtěch Bubník
Topic: 1984 Message: 2008

> I believe most relatively modern PDAs use 300-400 mA of current.

It really depends on the usage. If you have a display, that is somehow readable without backlight, you spare about 100 to 200mA current. CPU current depends on the idle times. Generally, PDA with backlight off and no CPU load takes less than 100mA.

> Plus, the cheap gears and such that they use in these things
> are not meant for that kind of continuous duty.

I agree with that. I expect the gears to be worn out after one hour.

I still plan to do some power optimization of PocketDigi software. For example, currently the waterfall is calculated for the whole spectrum, even though only a small window is shown. Calculating just the displayed part will decrease current.

73, Vojtech OK1IAK

2009. Re: SMT questions

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-08 23:37:26 UTC
From: Jim Fraser
Topic: 1928 Message: 2009

I built my 3B using a solder iron, I did not want my first attempt at the solder paste method to be on such a costly project. But after reading more about this method lately, today I ordered a SoftRock SDR transceiver and a tube of solder paste from Cash Olsen to give the toaster oven method a try. This will be my holiday project during the time off I will be taking between Christmas and New Years.

Jim K6JF

2010. Re: Muscle or human energy?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-08 23:37:42 UTC
From: Garry
Topic: 1976 Message: 2010

I'm sure you muxt have seen this by now but in case you havn't

http://www.humboldt.edu/~ccat/pedalpower/hec/hpeg/index.html

73

Garry/Ve7ajj--- In AT_Sprint@yahoogroups.com, "tf3kx" <kristinn1@...>
wrote:
>
> I am interested in operating my QRP rig, such as an ATS-3, solely
on
> muscle power, that is, only running it with energy that I have
produced
> with my own physical work (may be stored and buffered in a
battery)!
> Are there any suggestions or links on where I can find equipment for
> this or information?
>
> A couple of additional questions right away...
>
> - Are there any PORTABLE electrical generators available?
> - What kind of rechargable batteries would you suggest?
>
> 73 - Kristinn, TF3KX
>

2011. Re: Tuner for 80m-15m?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-08 23:43:52 UTC
From: Garry
Topic: 1995 Message: 2011

I have not the slightest idea what the losses are in my SLT tuner however with a half wave end fed antenna and 5 watts I had great success on field day and made many contacts, most on CW but some on SSB. As for whether it works on 80 m I did not try it as a half wave for 80 was simply too long for me to deal with as a portable set-up so I avoided the band for the most part.

Well actually I can't remember that far back but I don't recall operating any on 80 m. hi hi

Garry/Ve7ajj

--- In AT_Sprint@yahoogroups.com, Hank Greeb <n8xx@...> wrote:
>
>
> There is no "ideal" antenna coupler. For QRP operation, one needs to
> look at tradeoffs of size, weight, and losses in the inductors which are
> used. In the olden daze, before microminiaturization became "the rage"
> - folks generally used LARGE diameter AIR WOUND coils for most
> transmitting applications.
>
> Many folks don't consider losses in their antenna matching devices.
> Whatever you do, please look at the overall efficiency of "smaller" or
> "more friendly form factor" antenna couplers. The losses in inductors
> of small physical size, particularly toroids, may amaze anyone who
> calculates them. Typically I don't use anything but air wound coils for
> these devices, and, unless I'm going on a lengthy backpack trip (which I
> haven't done for several years), I'll take along my homebrew tuner with
> 2" OD air wound coils - made in the dark ages of ~1961. Yes, it's
> heavy, but the measured loss is less than 1 dB in most situations. I've
> seen >10 dB loss for some tuners of recent design when folks don't pay
> attention to the laws of physics. 10db loss between a 5 W rig and the
> antenna means you're getting only ½ watt to the feedline or antenna.
>
> 72/73 de n8xx Hg

>
> John A. Evans - N0HJ wrote:
>
> >I've had fairly good luck with Steve's ALT design (same design in Doug's SLT) with an added inductor for 80m (just twice the highest value inductor as what is in the ALT). You can find the ALT design on Steve's site or the SLT manual from http://qrpkits.com/ .
> >
> > I've not tried my end fed wire on 17m/15m yet, but once I complete my 3B, I'll build another ALT in a smaller and more friendly form factor and try out different lengths. I "may" also try to build another Fuchs tuner as well, but I'm kinda gun shy as my first attempt wasn't very successful.
> >
> >72 - john - n0hj
> >
> >John wrote:
> >
> >
> >>[Still waiting for my solder paste, so reading up on antenna tuners].
> >>
> >>Is there an "ideal" portable/QRP tuner for the ATS-3B that will cover all six 3B bands and handle reasonably "random" antennas?
> >>
> >
> >
>

2012. Re: [AT_Sprint] Re: Tuner for 80m-15m?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-09 00:25:49 UTC
From: Hank Greeb
Topic: 1995 Message: 2012

What call did you use for Field Day? I didn't find VE7AJJ in the 2007
Field Day results.

72 de n8xx Hg

Garry wrote:
> I have not the slightest idea what the losses are in my SLT tuner however with a half wave end fed antenna and 5 watts I had great success on field day and made many contacts, most on CW but some on SSB. As for whether it works on 80 m I did not try it as a half wave for 80 was simply too long for me to deal with as a portable set-up so I avoided the band for the most part.
>
> Well actually I can't remember that far back but I don't recall operating any on 80 m. hi hi
>
> Garry/Ve7ajj

2013. Tuner with a 3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-09 01:39:03 UTC
From: cadmanj43
Topic: 2013 Message: 2013

I just finished my 3b today.
It is awesome!
My question is how can I use my T1 tuner?
When I start to tune I get the reset from the over
current protection.
I've already tried lower voltage. (6v)

I bought the kit so I could take it backpacking.
I don't want to take additional equipment.

Thanks for any help.

Harold,
N8RQJ

2014. Re: [AT_Sprint] Tuner with a 3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-09 02:00:08 UTC
From: Jim Miller
Topic: 2013 Message: 2014

i'm going to be in the same boat after i finish my ats3b.

i'm planning to use a 50ohm pad built just for this purpose. it will knock the output down by 3db so the tuner will only see 2.5w but keep the impedence seen by the ats3b in check.

if 3db isn't sufficient to keep the ats3b from tripping i'll add in another 3db which should certainly do it. i think my t1 should do fine with 1.25w input.

73

jim ab3cv

2015. Re:Newbie to the group with a new kit

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-09 04:01:03 UTC
From: John Shadle
Topic: 1965 Message: 2015

Others will offer suggestions as to which method to use to put the kit together. I used the solder by hand with the doofus to hold down parts. You can read about it here

<http://www.al7fs.us/AL7FS5ATSprint2.html>

See my photos here

<http://www.flickr.com/photos/shadle/sets/72157602215143718/>

I suggest that you start your SMT experience by trying out a NorCal dummy load. It's a nice tool to have around the shack and it is a good (and cheap) introduction to SMT soldering whether you use the solder paste method or the regular/doofus method.

Pick one up here

<http://www.norcalqrp.org/ncdummyload.htm>

Good luck, and have fun! I did!

-john W4PAH

2016. Re: [AT_Sprint] Re: Crank power

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-09 04:26:38 UTC
From: Steven Weber
Topic: 1984 Message: 2016

>In short, it would comsume less (human) power to carry the small
>solar panel(s) and/or additional batteries...
>
I'm afraid your right Mike. The only problem with the solar scheme is I might not be able to spend enough time in the sun to make that viable either. I need to find a really tiny and light AC charger or make one. But when you get to a hostel and theres 10 hikers there who want to charge their cell phone in the one electrical outlet available, thats a problem too. Well, I got all winter to think of a solution.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2017. Re: Tuner with a 3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-09 05:17:58 UTC
From: radio_kx0r
Topic: 2013 Message: 2017

--- In AT_Sprint@yahoogroups.com, "cadmanj43" <cadmanj43@...> wrote:

Harold,

The T1 is kind of a disaster waiting to happen, because it subjects your rig to short bursts of high SWR/mismatch/reactance as it hunts for the right match. Even though the mismatch doesn't last long, it's intense enough to cause the ATS-3B to trip; and it surely subjects you final amp to some extra stress it doesn't need. The T1 would be a better product if it contained a resistive pad or attenuator.

I own a T1, but I rarely use it. I like my BLT's instead.

I like the idea of using a resistive pad (power attenuator) between the ATS-3B and the T1. The T1 will tune with a watt or so, so a 3 db attenuator would be OK as long as the ATS rig is putting out 2 or 3 watts. However, a 3 db attenuator doesn't look like 50 ohms to your rig unless it also sees 50 ohms. There will still be considerable reflected power seen by your rig.

My tests indicate that the current limit on the ATS-3B is really close to the trip point when running above 10 volts. I ran my rig into a BLT, which looks somewhat like a pad in the "Tune" position. Even in "tune" position the ATS-3B will trip out sometimes.
In "Tune" you're driving a bridge circuit that looks like 50 ohms resistive when it's balanced. When it's not balanced, the reflected power is limited, but it's NOT 50 ohms. Mismatched or reactive loads will still reflect power, they're just swamped by resisance, until you get them matched. So the ATS-3B may still trip. Running at low voltage will help things a lot, because it reduces the PA current. The BLT only needs a watt or so to light the LED in the balance detector. I think most of us can find an acceptable compromise.

A radical answer is to use a Norcal "Tuner-Upper" to tune the tuner/ antenna - these devices are an independent source and bridge with an LED indicator. They fit in an Altoids box - yes, they're as large as the AST-3B - and they work real well. You have to have one for each band. Just tune the tuner for a match with the Tuner Upper, attach the ATS-3B, and operate.

Of course, you could raise the current limit in the ATS-3B - I raised mine a little - but there are risks in this. It wouldn't be hard to raise it a bit for tuning, and then switch it back for operating. That's an inconvenient mod, and it doesn't solve everything, since the time you're most likely to blow something is when you're tuning.

You're not going to take this rig "stock", connect it to a 12V battery, just run it into whatever tuner you like, and load up your bedsprings or gutters without thinking about the problem.

A better strategy is to come up with known good antennas and tuners that agree with this rig, maybe limit the voltage for tuning, use a bridge or attenuator, and then be happy that your rig is running into a good 50 ohm match and is operating happily. The final in this rig is very efficient over a wide supply voltage range, and it uses a minimum of battery power, but it requires a correct load. The current limit provides some protection, but only for mismatches that cause the PA current to rise.

Don't forget the old trick of first adjusting your tuner with your receiver. When you've peaked the band noise as well as you can, switch to "Tune", and then your rig will already be close to a match.

Sorry to write another essay, but this subject is very much on my mind, because I intend to use this rig for portable/hiking and with antennas that require a tuner.

Good luck

KX0R
Carey Fuller

> I just finished my 3b today.
> It is awesome!
> My question is how can I use my T1 tuner?
> When I start to tune I get the reset from the over
> current protection.
> I've already tried lower voltage. (6v)
>
> I bought the kit so I could take it backpacking.
> I don't want to take additional equipment.
>
> Thanks for any help.
>
> Harold,
> N8RQJ
>

2018. Re: Tuner for 80m-15m?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-09 05:41:06 UTC
From: Garry
Topic: 1995 Message: 2018

That may be because I did not bother to send in my logs. I never do.

73

Garry/Ve7ajj

--- In AT_Sprint@yahoogroups.com, Hank Greeb <n8xx@...> wrote:
>
> What call did you use for Field Day? I didn't find VE7AJJ in the
2007
> Field Day results.
>
> 72 de n8xx Hg
>
> Garry wrote:
> > I have not the slightest idea what the losses are in my SLT tuner
however with a half wave end fed antenna and 5 watts I had great
success on field day and made many contacts, most on CW but some on
SSB. As for whether it works on 80 m I did not try it as a half wave
for 80 was simply too long for me to deal with as a portable set-up
so I avoided the band for the most part.
> >
> > Well actually I can't remember that far back but I don't recall
operating any on 80 m. hi hi
> >
> > Garry/Ve7ajj
>

2019. Re: Crank power

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-09 05:45:46 UTC
From: radio_kx0r
Topic: 1984 Message: 2019

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:

Steve,

If you do find a neat answer, there are millions of potential customers out there that might want to buy a product that they could use when travelling, in case of emergencies, etc. Lots of Ipods and phones out there...

I believe that turning a hand crank for a long time will expose some users to repetitive motion injury (aka carpal tunnel, etc.). If people can have problems using a keyboard or a mouse, think what a crank-powered device would do for them...

Solar sure isn't the answer eveywhere - years ago I spent 4 days on the AT along the TN/NC border, and it was 4 days of rain in the forest. I saw no sun and rarely could see where I was, much less see the sky.

Maybe in a few years buildings will be wired with low voltage DC, and then we can get rid of these millions of wasteful, inconvenient wall transformers. We could save some serious energy...

Maybe for now the answer really is just a larger lithium battery.

Could you invent a way to convert a few watts while walking, without it being a hassle or a bunch of heavy machinery? Maybe some kind of shock-absorbing insoles that convert some pressure into energy? How do those shoes that light up work? I'm not joking...visualize...electric boots...

Enjoy creativity

KX0R
Carey Fuller
> >In short, it would comsume less (human) power to carry the small
> >solar panel(s) and/or additional batteries...
> >
> I'm afraid your right Mike. The only problem with the solar scheme is I
> might not be able to spend enough time in the sun to make that viable
> either. I need to find a really tiny and light AC charger or make one. But
> when you get to a hostel and theres 10 hikers there who want to charge
> their cell phone in the one electrical outlet available, thats a

problem
> too. Well, I got all winter to think of a solution.
>
>
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com
>

2020. Re: [AT_Sprint] Re: Tuner with a 3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-09 05:46:13 UTC
From: Jim Miller
Topic: 2013 Message: 2020

i think a resistive 6db pad formed by two 150ohm resistors to ground
with a 36ohm series resistor between them, would present:

150||186 = 83 ohms when open

150||36 = 29 ohms when shorted

so less than 2:1 at either extreme.

similarly a 3db resistive pad with 295 and 18 would present 3:1 max.

what's the swr limit for a ats3b when run at 12v?

73

jim ab3cv

2021. Re: Tuner for 80m-15m?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-09 06:35:45 UTC
From: radio_kx0r
Topic: 1995 Message: 2021

--- In AT_Sprint@yahoogroups.com, "John" <af4ex.radio@...> wrote:

In my opinion the BLT is a nice compromise tuner for portable work. I have 5 of them now, none is stock, and each one is optimized for a range of frequencies. One covers 160 through 20M, another 5 through 30 Mhz, one is just for the HF bands, one is a true Z-match for 1.8-30 Mhz, and another is just for 20-80 Mhz. The "stock" BLT has a very limited frequency range. Getting more than a 4:1 frequency range while matching a wide range of reactive loads requires adding switches for extra capacitance, using high capacitance polyvaricons, at least one switch for high frequency taps on the main toroid, or more radical mods.

Even though my Z-match version covers a huge frequency range, and works well over much of that range, it suffers from unbalance at the high end, and its efficiency is not as good as the regular BLT. A true Z-match uses a tapped coil with a double-tuned circuit, and ideally the two ranges overlap. There's lots of info on Z matches on the internet. Charlie Lofgren's original article is worth reading.

The stock BLT is a good starting point. It's inexpensive, works, and you can modify it. Get familiar with it, and then it's pretty intuitive to increase or decrease the turns on the toroid, add switches for taps, extra caps, use part of a ganged polyvaricon cap for the high-frequency end, etc.

People have asserted that the BLT's are inefficient - but I have run two of them back-to-back, one feeding the other with balanced line, and then back to a 50-ohm load and meter, while adjusting them both for more and more reactance - and I think you'll have a hard time beating them, at least for QRP and balanced lines. Anything better will be much larger and heavier, and that's too large for lightweight portable work. Of course there's more loss as you force them to deal with more and more reactive power.

The Q of the main inductor is well over 200, especially if you use a T106-6 (yellow) core instead of the stock T106-2 (red) core. With any reasonable antenna and feedline, a BLT will deliver good efficiency and convenience. If you want to operate on several bands with just one antenna, you'll find a way to get there.

One option is to carry two modified BLT's for those few times when you really need to work from 80 through 15 meters.

If you want to use an unbalanced tuner, the addition of a good current balun may enable you to use balanced line. I tried this with my T1, and my KX1, and it seems to work OK. I have no idea how the

efficiency holds up with reactive, mismatched loads...but many folks
use this approach for QRP, as well as QRO. But a tuner and a balun
weigh as much as a BLT.

This is a big subject, there are no easy answers, it gets down to
complex numbers, Smith charts, and multiple tradeoffs...

I think it's a lot of fun to work through this stuff though. We can
learn a lot from playing with tuners and antennas. I'm sure not
sorry for the 5 BLT's.

If someone invents that "ideal tuner", they could sell them for more
than the ATS-3B's cost.

Consider that the genius engineers that created the Yeasu FT-817,
which does many things well, didn't even offer a tuner to go with it -
????? Is everything 50 ohms in Japan? I don't think so...

KX0R

>
> Is there an "ideal" portable/QRP tuner for the ATS-3B that will
> cover all six 3B bands and handle reasonably "random" antennas?
>
> I have K0XR's writeup on the BLT, but am concerned that it does not
> cover 80m and also seems to have problems with antennas far from
> resonance. (I plan to use the tuner on balcony railings,
downspouts,
> etc that might be reactive).
>
> If the BLT is redesigned to cover 80m will it still work for 15m?
>
> I'd like to keep the balanced line output for running TV feedline
to
> a 40/80m loop antenna that I'm planning to build.
>
> Has anybody tried the SLT with the 3B? Does it cover 80m and handle
> random antennas well? (i.e. overcome the 3B's shutdown detector)
>
> Another tuner I've read about is the ZM-4.
> http://www.qrpproject.de/UK/ZM4UK.html ,but apparently not used
> much. Has anyone tried this one?
>
> Thanks for any feedback.
> -AF4EX
>

2022. Re: Tuner with a 3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-09 06:51:33 UTC
From: radio_kx0r
Topic: 2013 Message: 2022

--- In AT_Sprint@yahoogroups.com, "Jim Miller" <jim@...> wrote:

Jim,

Thanks for the numbers. My 2 cents worth here is that metal oxide resistors (MO) work well for these jobs.

I think we're going to need 6db, unless we modify the rig's current limit. Mine is already near the "stock" trip point, into 50 ohms, on 15 meters, with 12V. Once I raised the limit to 0.9A I was able to actually tune the rig into a BLT.

It's not just the SWR, it depends on the magnitude and phase of reverse power the rig sees. Some mismatches reduce the current draw. Complex impedance. I think the rig may trip at less than 2:1 SWR, even if it's modified, on the upper frequencies when running on 12V. The current varies a good bit as you change the load.

I hope others who have got to this point will add to the discussion. We could take Steve's advice, run on 9V, and keep life simple. That rig runs almost perfect on 9V.

73

Carey Fuller
KX0R

> i think a resistive 6db pad formed by two 150ohm resistors to ground
> with a 36ohm series resistor between them, would present:
>
> 150||186 = 83 ohms when open
>
> 150||36 = 29 ohms when shorted
>
> so less than 2:1 at either extreme.
>
> similarly a 3db resistive pad with 295 and 18 would present 3:1 max.
>
> what's the swr limit for a ats3b when run at 12v?
>
> 73
>
> jim ab3cv
>

2023. Re: 150 pF Caps in the Crystal Filter

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-09 06:57:59 UTC
From: radio_kx0r
Topic: 1981 Message: 2023

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
Steve,

It's a beautiful filter. You got it just right for most of what the rig is best for. I'm surprised how good the out-of-band rejection is - especially with no special shielding, just good layout.

That new keying circuit is cool too.

Thanks

KX0R

>
> >I still hope Steve will comment of the 150 pF caps vs the older 100
> >pF caps in the crystal filters.
> >
> Basically, I thought the filter sounded a little too wide with 100p caps so
> I used 150 to make it a little narrower.
>
>
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com
>

2024. Re: [AT_Sprint] Re:Newbie to the group with a new kit

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-09 07:26:41 UTC
From: jess gypin
Topic: 1965 Message: 2024
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2025. Re:Tuner with a 3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-09 13:13:53 UTC
From: Buddy Brown
Topic: 2013 Message: 2025

Posted by: "cadmanj43" <mailto:cadmanj43@...?Subject=
Re%3ATuner%20with%20a%203b> cadmanj43@...
<http://profiles.yahoo.com/cadmanj43> cadmanj43

Thu Nov 8, 2007 5:39 pm (PST)

I just finished my 3b today.
It is awesome!
My question is how can I use my T1 tuner?
When I start to tune I get the reset from the over
current protection.
I've already tried lower voltage. (6v)

I bought the kit so I could take it backpacking.
I don't want to take additional equipment.

Thanks for any help.

Harold,
N8RQJ

Has anyone thought of placing a bridge type SWR indicator in line, (just for
tuning),
Doesn't this limit the SWR seen by the radio to 1.5:1? I wonder if this
would work
with the T1 tuner.
Buddy - N5BUD

2026. Re: [AT_Sprint] Re:Tuner with a 3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-09 13:59:56 UTC
From: n0tu/Steve
Topic: 2013 Message: 2026

I use a T1 with my ATS3A all the time on a fully charged lithpoly
battery (11v) and haven't notice any issues? Has the 3B changed in PA
design?

On Nov 9, 2007 6:13 AM, Buddy Brown <buddybrown@...> wrote:
>
>
>
> Posted by: "cadmanj43" cadmanj43@... cadmanj43
> Thu Nov 8, 2007 5:39 pm (PST)
> I just finished my 3b today.
> It is awesome!
> My question is how can I use my T1 tuner?
> When I start to tune I get the reset from the over
> current protection.
> I've already tried lower voltage. (6v)
>
> I bought the kit so I could take it backpacking.
> I don't want to take additional equipment.
>
> Thanks for any help.
>
> Harold,
> N8RQJ
> --
>
> Has anyone thought of placing a bridge type SWR indicator in line, (just for
> tuning),
> Doesn't this limit the SWR seen by the radio to 1.5:1? I wonder if this
> would work
> with the T1 tuner.
> Buddy - N5BUD

2027. Re: [AT_Sprint] Re: Tuner with a 3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-09 14:09:07 UTC
From: Mark Brueggemann
Topic: 2013 Message: 2027

This is funny.

The thread started off with a question about the efficiency of
various tuners, and has mutated to discussing resistive matching
as a plausible solution.

Mark K5LXP
Albuquerque, NM

2028. Re: [AT_Sprint] Re: Tuner with a 3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-09 14:22:22 UTC
From: Gary Raney
Topic: 2013 Message: 2028

Good morning,

I had the same idea yesterday when I was thinking about how to protect the finals on tune-up. I was planning on a 5dB pad, but 6dB will work and give an extra dB of protection. I was planning on mounting three resistors between two BNC plugs (one male one female) and then encasing the resistors in epoxy. The whole assembly would be about 1in - 1.5 in in length and a little wider than a BNC connector. Great size for backpacking.

Gary KM5TY

On Nov 8, 2007, at 10:46 PM, Jim Miller wrote:

> i think a resistive 6db pad formed by two 150ohm resistors to ground
> with a 36ohm series resistor between them, would present:
>
> 150||186 = 83 ohms when open
>
> 150||36 = 29 ohms when shorted
>
> so less than 2:1 at either extreme.
>
> similarly a 3db resistive pad with 295 and 18 would present 3:1 max.
>
> what's the swr limit for a ats3b when run at 12v?
>
> 73
>
> jim ab3cv
>
>

2029. Re:Tuner with a 3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-09 18:01:45 UTC
From: radio_kx0r
Topic: 2013 Message: 2029

--- In AT_Sprint@yahoogroups.com, "n0tu/Steve" <n0tu.qrp@...> wrote:

Buddy,

The 3B has the same PA but has a fast current limit circuit in the B+
line feeding it. Under some conditions of mismatch, as when tuning a
tuner, it may trip. The "stock" limit is set at 820 mA. The effect
occurs more easily if the filters are adjusted for maximum output.

I think using a T1 without a pad is rough.

KX0R

> I use a T1 with my ATS3A all the time on a fully charged lithpoly
> battery (11v) and haven't notice any issues? Has the 3B changed in
PA
> design?
>
> On Nov 9, 2007 6:13 AM, Buddy Brown <buddybrown@...> wrote:
> >
> >
> >
> > Posted by: "cadmanj43" cadmanj43@... cadmanj43
> > Thu Nov 8, 2007 5:39 pm (PST)
> > I just finished my 3b today.
> > It is awesome!
> > My question is how can I use my T1 tuner?
> > When I start to tune I get the reset from the over
> > current protection.
> > I've already tried lower voltage. (6v)
> >
> > I bought the kit so I could take it backpacking.
> > I don't want to take additional equipment.
> >
> > Thanks for any help.
> >
> > Harold,
> > N8RQJ
> >

_____
_
> >
> > Has anyone thought of placing a bridge type SWR indicator in
line, (just for
> > tuning),
> > Doesn't this limit the SWR seen by the radio to 1.5:1? I wonder

if this
> > would work
> > with the T1 tuner.
> > Buddy - N5BUD
>

2030. Re: Tuner with a 3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-09 18:04:51 UTC
From: radio_kx0r
Topic: 2013 Message: 2030

--- In AT_Sprint@yahoogroups.com, Mark Brueggemann <qrq_cw@...> wrote:
Mark,

Yes, but the intent is to use the resistor/pad only for tuning a tuner,
then remove it and run at full power into a matched load.

KX0R
>
>
> This is funny.
>
> The thread started off with a question about the efficiency of
> various tuners, and has mutated to discussing resistive matching
> as a plausible solution.
>
>
> Mark K5LXP
> Albuquerque, NM
>

2031. Altoids Boxes are Different

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-09 18:11:00 UTC
From: radio_kx0r
Topic: 2031 Message: 2031

Has anyone else seen the new Altoids tins? What do you think?

The new ones have an angular design stamped in the lids. They are no longer flat.

I made special trip downtown yesterday to find some old Altoids so I could get a couple of the Original Classic boxes before they disappear.

T know this is silly...

Maybe the old-style ones will become valuable as people like us hoard them away...

KX0R
Carey

2032. Re: Altoids Boxes are Different

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-09 18:43:18 UTC
From: Jim Fraser
Topic: 2031 Message: 2032

Unless you really love the candy, you can get plain tin boxes of the same size at specialtybottle.com for $0.64 each. I recently ordered four of them for some of my small projects like the Tenna Dipper. I will also probably end up putting my 3B band modules into one of these times as well.

Jim K6JF

http://www.specialtybottle.com/index.asp?PageAction=VIEWPROD&ProdID=332

2033. Re: [AT_Sprint] Re: Crank power

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-09 18:44:17 UTC
From: Steven Weber
Topic: 1984 Message: 2033

>I believe that turning a hand crank for a long time will expose some
>users to repetitive motion injury (aka carpal tunnel, etc.). If

Maybe, but if you just need to get enough juice into a cell phone to make a few short calls, its suitable for that. It just can't be your primary charger.

>Maybe in a few years buildings will be wired with low voltage DC, and
>then we can get rid of these millions of wasteful, inconvenient wall
>transformers. We could save some serious energy...
>

I was thinking of setting up a non-profit orginzation to instal solar powered charging systems in all the AT shelters along the trail. Of course, being the head of this group, most of the money would go to my salery and for more fund rising :-) Thats what non-profits do, right?

>Could you invent a way to convert a few watts while walking, without
>it being a hassle or a bunch of heavy machinery? Maybe some kind of
>shock-absorbing insoles that convert some pressure into energy? How
>do those shoes that light up work? I'm not
>joking...visualize...electric boots...

The shoes that light up run on a battery. I have one taken out of a sneaker, one of the early ones. A small battery, LED and reed switch with a floating magnet are incased in a block of clear plastic. I have heard of experiments of putting piezo electric thingies in the heels of shoes, but they don't produce much energy.

I was thinking of addapating the method used in the shake and charge flashlights to hiking poles. Put a spring and strong magnet inside the pole and wrap a lot of wire around the outside. Running wires back to the battery might be a problem though.

Maybe a thermo pile you put in the camp fire at night?
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2034. Re: [AT_Sprint] Re:Tuner with a 3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-09 18:16:08 UTC
From: Steven Weber
Topic: 2013 Message: 2034

>I use a T1 with my ATS3A all the time on a fully charged lithpoly
>battery (11v) and haven't notice any issues? Has the 3B changed in PA
>design?

I know several people have blow up the PA (and keying transistor) in the 3/3A when trying to use the T1 and 12 V rig supply. So it is a problem.

What has changed in the 3B is the addition of the over current protection. Now that we know how easy it is to draw over 820 ma with a miss matched load, its amazing there hasn't been more trouble with blown finals in the earlier rigs.

Does the T1 remeber settings? If so, maybe it can be pretuned with a more robust rig.

I built something I've been meaning to kit up sometime. Its like a Tenna Dipper, but uses a programmable R/C oscillator chip from Linear tech. It will generate preset frequencies in all the ham bands, 80 to 10 meters. It is primarly intedend to be use for tuning loaded short verticals, like the MP1 or PAC. It can be placed near the antenna, so you can adjust the coil for a match with out having to run back and forth to the rig and watch a SWR meter. That can be time consuming. Of course, it can also be used to preset any antenna tuner (except an auto tuner). The board fits into an Altiods tin along with a 9V battery.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2035. Re: [AT_Sprint] Re: Tuner with a 3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-09 18:55:28 UTC
From: Mark Brueggemann
Topic: 2013 Message: 2035

--- radio_kx0r <careyfuller@...> wrote:

> the intent is to use the resistor/pad only for tuning a
> tuner, then remove it and run at full power into a matched load.

I see that now, so I will sheepishly return the the cave where
I had been lurking.

Interesting paradox though, a trail radio that isn't trail
antenna friendly. Seems for the price you pay in terms of
bulk, weight and cost of a tuner you could trade that for
a more robust PA.

Mark K5LXP
Albuquerque, NM

2036. Re: [AT_Sprint] Re:Tuner with a 3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-09 19:04:16 UTC
From: Jim Miller
Topic: 2013 Message: 2036

the t1 has a serial port that can be used to initiate a tune or recall a band. according to the manual it has one memory per band from 160-6m with the proviso that 60m and 40m share a common memory.

the smallest of micros would likely be sufficient to do the signalling and could be powered for a year or more on a 2032. elecraft makes a cable that works with an ft817 that has such a microcontroller in it. perhaps that could act as a model for a suitable design.

73

jim ab3cv

2037. Re: Tuner for 80m-15m?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-09 19:30:10 UTC
From: c.gondard
Topic: 1995 Message: 2037

Hello All

My favourite ATU for QRP operation is the T1 ATU from Elecraft : see :
http://www.elecraft.com/ ; much better than the BLT, but difficult to
compare a very sophisticated ATU with a a manual tuner ...

It is rather expensive (135 USD), but really, it can match nearly
everything between 80 to 4 m bands, in association with a 1/1 balun
if needeed !

72 de

Chris / F6FTB

--- In AT_Sprint@yahoogroups.com, "John" <af4ex.radio@...> wrote:
>
> [Still waiting for my solder paste, so reading up on antenna
tuners].
>
> Is there an "ideal" portable/QRP tuner for the ATS-3B that will
> cover all six 3B bands and handle reasonably "random" antennas?
>
> I have K0XR's writeup on the BLT, but am concerned that it does not
> cover 80m and also seems to have problems with antennas far from
> resonance. (I plan to use the tuner on balcony railings,
downspouts,
> etc that might be reactive).
>
> If the BLT is redesigned to cover 80m will it still work for 15m?
>
> I'd like to keep the balanced line output for running TV feedline
to
> a 40/80m loop antenna that I'm planning to build.
>
> Has anybody tried the SLT with the 3B? Does it cover 80m and handle
> random antennas well? (i.e. overcome the 3B's shutdown detector)
>
> Another tuner I've read about is the ZM-4.
> http://www.qrpproject.de/UK/ZM4UK.html ,but apparently not used
> much. Has anyone tried this one?
>
> Thanks for any feedback.
> -AF4EX
>

2038. Re: Tuner with a 3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-09 21:03:14 UTC
From: cadmanj43
Topic: 2013 Message: 2038

Thanks for all the info.
I started the snowball effect! LOL
I've used the recieve method succesfully but it takes some time.
I do it in test mode on the T1.
It is intended for L/C & Relay checks but works as manual tuning.

I think I'll try the Pad method first.
It seems really simple.

I'll try for my first contact with it tonight or Saturday.
That's if I can slow someone down to 5-8WPM. Hi Hi
I'll post pics after I get my label on it.

Thanks Steve, for a great little rig!

Thanks all!

Harold

N8RQJ

2039. RE: [AT_Sprint] Re: Tuner with a 3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-09 21:17:24 UTC
From: Ron W2CTX
Topic: 2013 Message: 2039

I was going to use the Tayloe SWR Indicator/Bridge kit between the 3B and the tuner.

http://www.qrpkits.com/swrindicator.html

-.-'---

_____
Windows Live Hotmail and Microsoft Office Outlook – together at last. Get it now.
http://office.microsoft.com/en-us/outlook/HA102225181033.aspx?pid=CL100626971033

2040. Re: [AT_Sprint] Re: Tuner with a 3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-09 21:51:18 UTC
From: Steven Weber
Topic: 2013 Message: 2040

>Interesting paradox though, a trail radio that isn't trail
>antenna friendly. Seems for the price you pay in terms of
>bulk, weight and cost of a tuner you could trade that for
>a more robust PA.

Not really Mark. No matter how robust a rigs PA is, depending on the type of antenna and feed line you use, your going to need some kind of tuner. If you use a resonate dipole, you don't need any tuner.

My favorate trail antenna is the end feed half wave, as it is the simplest and quickest to set up and works pretty good. A single band tuner for one of these can be made quite small and light.

The only issue is with the T1 tuner, which IMOHO adds too much bulk, weight and expense for the little bit of convenience it might give. A manually operated version built in a manor similer to my ALT tuner can be made for a fraction of the cost of the T1.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2041. Re: Are kits still available?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-09 22:29:38 UTC
From: w9goc
Topic: 1999 Message: 2041

--- In AT_Sprint@yahoogroups.com, "Jim Fraser" <jimf53@...> wrote:
>
> Steve's main web page states that there are less than 50 left of the
> second batch, but that was dated Oct 7. He is often on this group and
> will answer when he sees your post, or you can just email him
directly.
>
> Jim K6JF
Thanks, Jim.
Steve replied to my direct email yesterday with the disappointing news
that the kits are all gone.

Oh, well.

Thanks,
Frederick
W9GOC

2042. Re: [AT_Sprint] Re: Are kits still available?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-09 22:37:01 UTC
From: John A. Evans - N0HJ
Topic: 1999 Message: 2042

BUT !!!! Steve said that if he makes a third batch, and that possibility exists, that it wouldn't be until after the first of the year. It might help provide encouragement if folks would let Steve know privately that they are interested in getting an ATS-3B. It has to be worth his while to do another batch.

72 - john - n0hj

w9goc wrote:
>
>
> Steve replied to my direct email yesterday with the disappointing news
> that the kits are all gone.
>

2043. Re: Are kits still available?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-10 00:17:31 UTC
From: radio_kx0r
Topic: 1999 Message: 2043

--- In AT_Sprint@yahoogroups.com, "John A. Evans - N0HJ"
<jaevans@...> wrote:

Some people who bought the kits will decide not to assemble them, so
one or two may come up for sale here in the next few weeks...

KX0R

> BUT !!!! Steve said that if he makes a third batch, and that
> possibility exists, that it wouldn't be until after the first of
the
> year. It might help provide encouragement if folks would let Steve
know
> privately that they are interested in getting an ATS-3B. It has to
be
> worth his while to do another batch.
>
> 72 - john - n0hj
>
> w9goc wrote:
> >
> >
> > Steve replied to my direct email yesterday with the disappointing
news
> > that the kits are all gone.
> >
>

2044. Re: Tuner with a 3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-10 01:04:50 UTC
From: radio_kx0r
Topic: 2013 Message: 2044

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
One of the best reasons to use a tuner is so you can use one antenna on several bands. A dipole or loop work well over a wide range of frequencies if fed with low-loss line and a tuner.

I want to try Steve's end-fed half wave. Eznec says it works reasonably well. You don't need to carry a bulky feedline with this antenna, and with one high point, it'll go up easier and faster than most other efficient antennas.

You'll make more QSO's if you're on the rig, rather than trying to get another line up in a tree.

The Elecraft KX1's final is fairly robust - but it can generate parasitic oscillations with a 2:1 SWR. You need the KAT ATU, or an external tuner, to safely use that rig. I know, because I have one. That's being sold as a "trail friendly radio". The internal tuner will match only certain kinds of loads. It's still a fun radio, but I like the ATS rigs better.

72/73
Carey Fuller
KX0R

> >Interesting paradox though, a trail radio that isn't trail
> >antenna friendly. Seems for the price you pay in terms of
> >bulk, weight and cost of a tuner you could trade that for
> >a more robust PA.
>
> Not really Mark. No matter how robust a rigs PA is, depending on the type
> of antenna and feed line you use, your going to need some kind of tuner. If
> you use a resonate dipole, you don't need any tuner.
>
> My favorate trail antenna is the end feed half wave, as it is the simplest
> and quickest to set up and works pretty good. A single band tuner for one
> of these can be made quite small and light.
>
> The only issue is with the T1 tuner, which IMOHO adds too much bulk, weight
> and expense for the little bit of convenience it might give. A manually
> operated version built in a manor similer to my ALT tuner can be

made for a
> fraction of the cost of the T1.
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com
>

2045. Re: Altoids Boxes are Different

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-10 01:07:56 UTC
From: radio_kx0r
Topic: 2031 Message: 2045

--- In AT_Sprint@yahoogroups.com, "Jim Fraser" <jimf53@...> wrote:
Jim,

Thanks for this info. This supplier appears to be OK with small orders!

72/73

KX0R
Carey Fuller

> Unless you really love the candy, you can get plain tin boxes of the
> same size at specialtybottle.com for $0.64 each. I recently ordered
> four of them for some of my small projects like the Tenna Dipper. I
> will also probably end up putting my 3B band modules into one of
these
> times as well.
>
> Jim K6JF
>
> http://www.specialtybottle.com/index.asp?
PageAction=VIEWPROD&ProdID=332
>

2046. Re: Tuner for 80m-15m?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-10 01:26:47 UTC
From: tf3kx
Topic: 1995 Message: 2046

If Steve makes offers another batch of the 3B I just may sign up for one (I don't have any of his kits yet).

In that case, I would probably go for a simple inv-L network, that can be fed from either side. The main reason is that it uses only two variable components (L and C), which leaves no redundancy when we match an unknown impedance (R and X) to 50 Ohms. Thus, this kind of tuner uses a "minimum amount" of circuitry for matching, making me believe that its losses would be kept relatively low. This is in contrast to some other tuner designs, where the controls are 3 (or more), where the additional control degree of freedom may affect the Q of the circuit and leave us with perfect matching to R and X, but at a Q that results in more losses than necessary.

73 - Kristinn, TF3KX

--- In AT_Sprint@yahoogroups.com, "John" <af4ex.radio@...> wrote:
>
> [Still waiting for my solder paste, so reading up on antenna tuners].
>
> Is there an "ideal" portable/QRP tuner for the ATS-3B that will
> cover all six 3B bands and handle reasonably "random" antennas?
>
> I have K0XR's writeup on the BLT, but am concerned that it does not
> cover 80m and also seems to have problems with antennas far from
> resonance. (I plan to use the tuner on balcony railings, downspouts,
> etc that might be reactive).
>
> If the BLT is redesigned to cover 80m will it still work for 15m?
>
> I'd like to keep the balanced line output for running TV feedline to
> a 40/80m loop antenna that I'm planning to build.
>
> Has anybody tried the SLT with the 3B? Does it cover 80m and handle
> random antennas well? (i.e. overcome the 3B's shutdown detector)
>
> Another tuner I've read about is the ZM-4.
> http://www.qrpproject.de/UK/ZM4UK.html ,but apparently not used
> much. Has anyone tried this one?
>
> Thanks for any feedback.
> -AF4EX
>

2047. Re:Tuner with a 3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-10 13:31:07 UTC
From: dennisplc@aol.com
Topic: 2013 Message: 2047

Hi All

How does the Elekraft T1 ATU fair with the 3B, anybody tried it ?

Thought I'd try that once built.

Best 73's

Dennis G6YBC
G-QRP 1767, ARCI 12187

2048. Re:[AT_Sprint] Re:Tuner with a 3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-10 13:56:57 UTC
From: J. Haynes
Topic: 2048 Message: 2048

Check past posts. There's a lot of informative discussion on this tuner.

2049. Re: [AT_Sprint] Re:Tuner with a 3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-10 14:12:29 UTC
From: Gil Stacy
Topic: 2013 Message: 2049
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2050. Re:Tuner with a 3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-10 14:21:37 UTC
From: c.gondard
Topic: 2013 Message: 2050

Hello Denis

I use the T1 with my ATS3A and ATS3B for many months
It works perfectly with my 2X20m doublet + 450 ohms ladder line on
all bands from 80 up to 15m

The only thing to care is the overcurrent sensing system on the
ATS3B : during matching process, the T1 goes through high SWR areas,
and the overcurrent system trips : I found that installing a 10 ohms
resistance in serie with the power supply works well : during RX,
there is no noticeable voltage drop, and on TX, the supply drops to
8.5 volts (with 12v in the entry) : so the current is always low
enough to make the matching process possible until a good match, and
is safer for the 3X2N7000 !!

72 de
Chris / F6FTB

--- In AT_Sprint@yahoogroups.com, dennisplc@... wrote:
>
> Hi All
>
> How does the Elekraft T1 ATU fair with the 3B, anybody tried it ?
>
> Thought I'd try that once built.
>
>
> Best 73's
>
> Dennis G6YBC
> G-QRP 1767, ARCI 12187
>

2051. Re: [AT_Sprint] Re:Tuner with a 3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-10 14:33:29 UTC
From: john
Topic: 2013 Message: 2051

Excellent solution!

73
John K5MO

At 09:21 AM 11/10/2007, you wrote:
>Hello Denis
>
>I use the T1 with my ATS3A and ATS3B for many months
>It works perfectly with my 2X20m doublet + 450 ohms ladder line on
>all bands from 80 up to 15m
>
>The only thing to care is the overcurrent sensing system on the
>ATS3B : during matching process, the T1 goes through high SWR areas,
>and the overcurrent system trips : I found that installing a 10 ohms
>resistance in serie with the power supply works well : during RX,
>there is no noticeable voltage drop, and on TX, the supply drops to
>8.5 volts (with 12v in the entry) : so the current is always low
>enough to make the matching process possible until a good match, and
>is safer for the 3X2N7000 !!
>
>72 de
>Chris / F6FTB
>
>--- In AT_Sprint@yahoogroups.com, dennisplc@... wrote:
> >
> > Hi All
> >
> > How does the Elekraft T1 ATU fair with the 3B, anybody tried it ?
> >
> > Thought I'd try that once built.
> >
> >
> > Best 73's
> >
> > Dennis G6YBC
> > G-QRP 1767, ARCI 12187
> >
>
>
>
>
>
>Yahoo! Groups Links
>

>
>

2052. Re:Tuner with a 3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-10 16:08:16 UTC
From: g6ybc
Topic: 2013 Message: 2052

--- In AT_Sprint@yahoogroups.com, "Gil Stacy" <gilstacy@...> wrote:
>
> Dennis,
> Where you asleep during class, again? ;)
> There was a lot of discussion just this week on the topic. Look
under this
> thread and other threads discussing atu's from Monday through
yesterday.
> Steve KD1JV has offered his opinions as well.
> There are mixed results, but mostly not good. Apparently the Bee's
power
> limiting feature trips during the T1 tune up. The T1 has no
resistive
> bridge and it has the potential of damaging the Bee when using
maximum
> voltage. Earlier ATS's seemed to do okay with the T1, especially
when
> taking the precaution of using lower voltage source in tuning. One
cure may
> be the use of the Tayloe bridge kit which is offered by a vendor or
DIY.
> 73 Gil NN4CW

Hi Gil and the rest of the Group

Yes I'll put myself at the back of Class.

Reason due to other commitments not taken if any notice of any of the
threads within the group since joining about a month ago.

I now have a kit and intend to start this week so will go through
past and present more carefully so don't look daft in the future.

Thanks again to all who have replied with their comments
>
Look forward to working a few off you once up and running

Best 73's

Dennis G6YBC

2053. Re:Tuner with a 3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-10 16:12:43 UTC
From: g6ybc
Topic: 2013 Message: 2053

Sounds like something has come out of my daft question.

Thanks Chris, will certainly look at this

Regards

Dennis G6YBC

--- In AT_Sprint@yahoogroups.com, john <johnmb@...> wrote:

>
> Excellent solution!
>
> 73
> John K5MO
>
> At 09:21 AM 11/10/2007, you wrote:
> >Hello Denis
> >
> >I use the T1 with my ATS3A and ATS3B for many months
> >It works perfectly with my 2X20m doublet + 450 ohms ladder line on
> >all bands from 80 up to 15m
> >
> >The only thing to care is the overcurrent sensing system on the
> >ATS3B : during matching process, the T1 goes through high SWR
areas,
> >and the overcurrent system trips : I found that installing a 10
ohms
> >resistance in serie with the power supply works well : during RX,
> >there is no noticeable voltage drop, and on TX, the supply drops to
> >8.5 volts (with 12v in the entry) : so the current is always low
> >enough to make the matching process possible until a good match,
and
> >is safer for the 3X2N7000 !!
> >
> >72 de
> >Chris / F6FTB
> >
> >--- In AT_Sprint@yahoogroups.com, dennisplc@ wrote:
> > >
> > > Hi All
> > >
> > > How does the Elekraft T1 ATU fair with the 3B, anybody tried
it ?
> > >
> > > Thought I'd try that once built.

> > >
> > >
> > > Best 73's
> > >
> > > Dennis G6YBC
> > > G-QRP 1767, ARCI 12187
> > >
> >
> >
> >
> >
> >
> >Yahoo! Groups Links
> >
> >
> >
>

2054. RE: [AT_Sprint] Re: Altoids Boxes are Different

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-10 16:20:42 UTC
From: Milan
Topic: 2031 Message: 2054

I suddenly realize that the Altoids box is same with the
Fisherman's Friend box which is available in the Europe.
Milan
YU7NS

> -----Original Message-----
> From: AT_Sprint@yahoogroups.com
> [mailto:AT_Sprint@yahoogroups.com] On Behalf Of Jim Fraser
> Sent: 9. novembar 2007 19:43
> To: AT_Sprint@yahoogroups.com
> Subject: [AT_Sprint] Re: Altoids Boxes are Different
>
> Unless you really love the candy, you can get plain tin
boxes
> of the same size at specialtybottle.com for $0.64 each. I
> recently ordered four of them for some of my small
projects
> like the Tenna Dipper. I will also probably end up putting
my
> 3B band modules into one of these times as well.
>
> Jim K6JF
>
>
http://www.specialtybottle.com/index.asp?PageAction=VIEWPROD
&P
> rodID=332
>
>
>
>
>
> Yahoo! Groups Links
>
>
>
>
> _____ NOD32 2650 (20071109) Information _____
>
> This message was checked by NOD32 antivirus system.
> http://www.eset.com
>
>

2055. ATS3 and Tuners

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-10 22:36:46 UTC
From: ve3wmb
Topic: 2055 Message: 2055

I have been reading the recent discussion about the issues with using the T1 and ATS-3B.

I did some playing today with my ALT Tuner(another KD1JV design). A while back I bought the commercial version from Hendricks QRP, which has now been replaced by the SLT (uses switches rather than two pin headers to select the different toroidal inductors).

What I found was with the recommended 51ft wire and a 32foot counterpoise wire on the ground I am able to get a 1:1 match on 80m/40m/20m with no problems. I already knew that 30m is a bit problematic (~2:1 SWR) with this wire length but I have found that coiling up a couple of feet of wire will allow it to match on this band. This tuner uses a resistive SWR bridge so that in "Tune" mode most of the power goes into a 50 ohm dummy load keepin the ATS3A PA very happy. As this tuner fits in an Altoids tin it makes a great companion to my ATS3A and it will be what I use on the trail from now on.

Michael VE3WMB

P.S. I suspect that the SLT is slightly bigger than the original ALT but has the advantage of making the inductance selection a bit simpler.

2056. Re: ATS3 and Tuners

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-11 01:11:23 UTC
From: Garry
Topic: 2055 Message: 2056

Good information Michael. As I already have the SLT tuner it looks
like I will be good to go. HI.

Garry/Ve7ajj

--- In AT_Sprint@yahoogroups.com, "ve3wmb" <mbabineau@...> wrote:
>
> I have been reading the recent discussion about the issues with using
> the T1 and ATS-3B.
>
> I did some playing today with my ALT Tuner(another KD1JV design).
> A while back I bought the commercial version from Hendricks QRP,
which
> has now been replaced by the SLT (uses switches rather than two pin
> headers to select the different toroidal inductors).
>
> What I found was with the recommended 51ft wire and a 32foot
> counterpoise wire on the ground I am able to get a 1:1 match on
> 80m/40m/20m with no problems. I already knew that 30m is a bit
> problematic (~2:1 SWR) with this wire length but I have found that
> coiling up a couple of feet of wire will allow it to match on this
> band. This tuner uses a resistive SWR bridge so that in "Tune" mode
> most of the power goes into a 50 ohm dummy load keepin the ATS3A PA
> very happy. As this tuner fits in an Altoids tin it makes a great
> companion to my ATS3A and it will be what I use on the trail from
now on.
>
> Michael VE3WMB
>
> P.S. I suspect that the SLT is slightly bigger than the original ALT
> but has the advantage of making the inductance selection a bit
simpler.
>

2057. Jordana 720

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-11 03:39:18 UTC
From: J. Haynes
Topic: 2057 Message: 2057

I'm looking at a reasonably-priced Jordana 720 and don't see an 'audio in' jack (mic or line). This device is recommended for PSK31, right? Just checking.

2058. Re: [AT_Sprint] Jordana 720

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-11 12:22:29 UTC
From: Vojtěch Bubník
Topic: 2057 Message: 2058

> I'm looking at a reasonably-priced Jordana 720 and don't see an 'audio in' jack
> (mic or line). This device is recommended for PSK31, right? Just checking.

The device has has nice format for digital modes: big display, big keyboard. It is no more produced, but you could get it on e-bay for a reasonable price.

It does not have an audio in jack. You must do it yourself. If you are not brave enough to do it, either use audio coupling (put ear bud on the microphone hole, works quite well in quiet environment), or buy something else.

73, Vojtech OK1IAK

2059. Re: Jordana 720

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-11 12:30:23 UTC
From: kc7fys
Topic: 2057 Message: 2059

> It does not have an audio in jack. You must do it yourself. If you are not brave enough to do it, either use audio coupling (put ear bud on the microphone hole, works quite well in quiet environment), or buy something else.
>
> 73, Vojtech OK1IAK

Vojtech,
Brave? I'm very brave. Bravery is my strong suit.
Do you have any tips or instructions on making this mod?
Regards,
Jonathan KC7/7J1

2060. Re: [AT_Sprint] Re: Jordana 720

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-11 12:50:26 UTC
From: Vojtěch Bubník
Topic: 2057 Message: 2060

Hi Jonatan.

> Do you have any tips or instructions on making this mod?

I modded my iPaq 3630. First I added a SMD 2.5mm jack socket, that I removed from a broken cell phone. It happened, that RF induced into ground loop created by phone and mic cables connected to ATS3 on one side and PDA on the other side burned grounds and audio PA in the PDA. After this incident I bridged audio PA and PDA was no more able to drive earphones. Then I removed the added 2.5mm socket, disconnected path of the earphones ring contact and connected the microphone there. The earphone socket has a disconnect switch in my case, which I reused to disconnect internal microphone. So now I could connect PDA to ATS3 with a single cable and there will be no dangerous ground loops closed through the delicate PDA board.

I found out one needs to attenuate audio signal of ATS3 quite a lot before you feed it into microphone input of the PDA. I put 1/50 voltage divider in the audio cable on the PDA side. If the attenuator is put on the ATS3 side, PDA will pick up a lot of noise. I plan to build the voltage divider into the PDA later making it more a Line In than Mic input. The microphone is powered, do not forget to decouple it by a capacitor before connecting the attenuating resistor divider.

73, Vojtech OK1IAK

2061. Re:Jordana 720

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-11 16:01:11 UTC
From: jer terez
Topic: 2057 Message: 2061

hi
likewise i don't see an audio in or mic jack but here
is a mic. if there is an alternative to putting the
headphone next to the mic i would very much like to
know about it.
thanks
jerry aa1of

Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

2062. Re:Tuner with a 3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-11 16:05:31 UTC
From: jer terez
Topic: 2013 Message: 2062

Chris / F6FTB wrote
>I found that installing a 10 ohms
>resistance in serie with the power supply works well

hi chris
was this in series with the power supply to the whole
rig? and what were you using for a power supply?

tnx
jerry aa1of

Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

2063. Re: [AT_Sprint] Re:Jordana 720 (Jornada??)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-11 16:31:25 UTC
From: roncasa@verizon.net
Topic: 2063 Message: 2063

I hate to bust anyone's you know what, but isn't it spelled "Jornada"??

I had some fun trying to figure out what you folks were talking about. I thought a new kit came out!

Ron, wb1hga

2064. Re: Jornada 720

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-11 16:46:02 UTC
From: eplerkeppler
Topic: 2057 Message: 2064

--- In AT_Sprint@yahoogroups.com, "kc7fys" <kc7fys@...> wrote:
>
>
> > It does not have an audio in jack. You must do it yourself. If you are
> not brave enough to do it, either use audio coupling (put ear bud on the
> microphone hole, works quite well in quiet environment), or buy
> something else.
> >
> > 73, Vojtech OK1IAK
>
> Vojtech,
> Brave? I'm very brave. Bravery is my strong suit.
> Do you have any tips or instructions on making this mod?
> Regards,
> Jonathan KC7/7J1
>

Perhaps a bluetooth project?

Well if you plugged in a bluetooth devices to the Jornada then came up
with blue tooth addapter for audio on the AT_Sprint side.

Here's a short forum section on the 720 bluetooth posibilities:
http://www.hpcfactor.com/forums/forums/thread-view.asp?tid=5219&start=1

-- Charles

2065. Re:Jornada 720 & adding an audio in/mic jack

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-11 17:37:31 UTC
From: jer terez
Topic: 2065 Message: 2065

>It does not have an audio in jack. You must do it
>yourself. If you are not brave
>enough to do it

so has anyone tried this with, specifically, a jornada
720?

i.e., to do digital with and ATS radio

(i am not totally lacking in bravery but if someone
else has already figured out how to do this right then
i would sure like to know how to do it, too, and its
clear that others would also.)

thanks
jerry aa1of

Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

2066. Re:Tuner with a 3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-11 18:51:43 UTC
From: cadmanj43
Topic: 2013 Message: 2066

--- In AT_Sprint@yahoogroups.com, jer terez <ohwenzelph@...> wrote:
>
> Chris / F6FTB wrote
> >I found that installing a 10 ohms
> >resistance in serie with the power supply works well
>
> hi chris
> was this in series with the power supply to the whole
> rig? and what were you using for a power supply?
>
> tnx
> jerry aa1of
>
> _____
> Do You Yahoo!?
> Tired of spam? Yahoo! Mail has the best spam protection around
> http://mail.yahoo.com
>

Thanks Chris!
The 10 Ohm resister worked great!
Now i'm going to build a tuning plug.

Thanks again,

Harold
N8RQJ

2067. Jornada 720 & Nokia 810

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-11 22:51:54 UTC
From: eplerkeppler
Topic: 2067 Message: 2067

I've just had some encoraging corespondance with Klaus Rotter about
the Nokia 810.

Here it is below:

>Chas Mc wrote:
>> I'm very interested if you come up with a successful port of PSK31
software
> for Nokia 810.
> > Maybe you are porting KPSK, the KDE PSK31.
>
>No, I am porting gpsk 0.3, the predessor of kpsk. gpsk was not complete,
>but I had to rewrite the menu code anyway and added a nice waterfall
>diagram.
>
>> I looked at the pictures of the phone and I don't see any physical
port or
> jack for
> > audio in, just headphones (out).
>
>The N810 has stereo line/headphone out and microphone in. I want to
>reduce the line level supplied from my rig (a FT817) and want to connect
>it to the microphone in, with transformers of course. The N810 also
>supports USB-host, so one may connect a PSK hardware interface. But I
>don't want to do that. One nice thing would be to connect a USB-RS232
>interface, so that one could directly control its rig. The N810 has no
>RS232 in/out, so PTT has to be done with a RS232/USB interface or a VOX
>mode. Unfortunately, the FT817 doesn't support VOX mode with the data
>interface.
>
>> If you have had some luck please let me know.
>
>I will do... if I get something up and running I will publish at my
>account at garage.maemo.org.
>
>Cheers, -Klaus
>
>--
>Klaus Rotter * klaus <awt> rotters <dowt> de * www.rotters.de
---

-- Charles McMurrough

2068. New file uploaded to AT_Sprint

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-12 04:39:16 UTC
From: AT_Sprint@yahoogroups.com
Topic: 154 Message: 2068

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the AT_Sprint
group.

File : /ATS3a label3JA.pdf
Uploaded by : steve_n0tu <n0tu.qrp@...>
Description : Label with directions

You can access this file at the URL:
http://groups.yahoo.com/group/AT_Sprint/files/ATS3a%20label3JA.pdf

To learn more about file sharing for your group, please visit:
http://help.yahoo.com/help/us/groups/files

Regards,

steve_n0tu <n0tu.qrp@...>

2069. Label for ATS3A in files

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-12 04:47:48 UTC
From: Steve Galchutt
Topic: 2069 Message: 2069

I just added my 'bonehead label' to files. I called it Bonehead cause it's for guys like me who need the instructions in front of them to remind them which button does what! Got a leaky memory.

Heres some pics of it in use.
http://arsqrp.pbwiki.com/Sunday-Goat-Hike-with-ATS3A
http://picasaweb.google.com/n0tu.qrp/SundayPMHike/photo#s5131734554156391522

Yup, I'm just now finishing my model-A. BUT Mobel-B is on the bench and I'm making progress. Maybe even rev my label once the B-model lights up!

Steve/n0tu

2070. Re: Jornada 720 (ATS3B>MIC IN)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-12 10:52:22 UTC
From: kc7fys
Topic: 2057 Message: 2070

Bluetooth.... This device is pre-bluetooth by a couple years.
I am pretty excited, though. Right there at my desk at school I got the Pocket Digi installed on WinCE on my Jornada 720, and with an earbud held up to the mic hole (far from ideal--but surprisingly effective) and replaying the VERY helpful K7AGE YouTube PSK31 test video, I was readin' PSK31 on my palmtop device! I'm not too cool for school--I was really excited it was working! I could imagine a crude sort of rubber boot that would shut out some outside sound (like the olde modems I used to use in 79 in junior high!)--but drawing from some live taping experience I had in my OTHER obsessive hobby, there's a way to make a little attenuator that would bring the Bee's output down to mic level if I were to hack in to the Jornada 720. This was the bravery Vojtech was referring to.
Is there anybody who could shoot me over a bit more detail on how I would brew up such an attenuator? (In slightly more detailed terms.)
Anyway, things are going well on the road to PSK31 with the ATS3B.
Jonathan

2071. Re: [AT_Sprint] Re: Jornada 720 (ATS3B>MIC IN)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-12 11:55:03 UTC
From: Vojtěch Bubník
Topic: 2057 Message: 2071

Hi Jonathan.

There is a known bug in PocketDigi 1.0.10 build for Jornada. The menu is missing.
Please use version 1.0.9 until I provide a bugfix. I think there is no ATS support in
1.0.9, so you would not be able to TX though.

73, Vojtech OK1IAK

2072. Re: Label for ATS3A in files

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-12 17:52:29 UTC
From: Buddy Brown
Topic: 2069 Message: 2072

You might also look at the labels I posted for the ATS3B some time back.
Look at
http://groups.yahoo.com/group/AT_Sprint/files/Generic%20ATS3B%20Label/
72,
Buddy - N5BUD

<http://groups.yahoo.com/group/AT_Sprint/message/2069;_ylc=X3oDMTJyczE1ZTZlB
F9TAzk3MzU5NzE1BGdycElkAzE4MDM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARtc2dJZAMyMDY5B
HNlYwNkbXNnBHNsawN2bXNnBHN0aW1lAzExOTQ4NjI3MjU-> Label for ATS3A in files

Posted by: "Steve Galchutt" <mailto:n0tu.qrp@...?Subject=
Re%3ALabel%20for%20ATS3A%20in%20files> n0tu.qrp@gmail.com
<http://profiles.yahoo.com/steve_n0tu> steve_n0tu

Sun Nov 11, 2007 8:47 pm (PST)

I just added my 'bonehead label' to files. I called it Bonehead cause
it's for guys like me who need the instructions in front of them to
remind them which button does what! Got a leaky memory.

Heres some pics of it in use.
<http://arsqrp.pbwiki.com/Sunday-Goat-Hike-with-ATS3A>
http://arsqrp.pbwiki.com/Sunday-Goat-Hike-with-ATS3A

<http://picasaweb.google.com/n0tu.qrp/SundayPMHike/photo#s513173455415639152
2>
http://picasaweb.google.com/n0tu.qrp/SundayPMHike/photo#s5131734554156391522

Yup, I'm just now finishing my model-A. BUT Mobel-B is on the bench
and I'm making progress. Maybe even rev my label once the B-model
lights up!

Steve/n0tu

2073. Potentual problem with 15M transmit in 3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-12 21:48:55 UTC
From: Steven Weber
Topic: 1999 Message: 2073

Carey, KX0R, discoverd a potentual problem when transmitting on 15 meters. He discovered that after a few minutes of transmitting, the output spectrum went all to hell. This is only a problem on 15 meters.

I tried to duplicate the problem with my rig and after a solid 5 minutes of key down with 5 watts out, I failed to duplicate it. Then I put the heat gun to the board and it became apparent.

What is happening is this. The roll off of the DDS output filter is somewhat less than 21 MHz. If the ferrite chip inductors in the filter get warm, thier value goes up. This can reduce the output of the filter to the point the comparitor in the DDS doesn't have enough singal to work with and becomes erratic.

The extent of this problem is hard to judge. It depends on the exact value of the inductors you happen to have and the operating tempature. If your values are on the high side and your operating outside on a hot summer day, there is likely to be a problem.

One way to tell is to transmit into a dummy load and monitor the output power. Heat the DDS filter area with a heat gun and see how hot you have to get it before the output drops off significantly. If you have to get it real hot, then your okay. If it only takes a little heat, then you need to do a fix.

Thankfully, the fix is pretty simple. We just have to rise the output level of the DDS a little. This is done by reducing the value of R15, the 3.9K resistor. Droping it down to 3.3K should do the trick in most cases. 2.7K would give some more margin. I don't have either of these values on hand, but will get some in case anyone needs them.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2074. auto power off for ATS-3c?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-13 01:28:47 UTC
From: Vojtěch Bubník
Topic: 2074 Message: 2074

Hi Steve.

I think I ruined my LiPo pack after I fell asleep with the rig powered and did not disconnect it for the next day. LiPols are very sensitive in this regard. They inflate and lose capacity.

How about to use a 5V stabilizer with enable pin and switch the whole analog part off after some period of inactivity? It would also be very useful to switch the rig off after the battery falls under a defined threshold.

73, Vojtech OK1IAK

2075. Re: [AT_Sprint] Potentual problem with 15M transmit in 3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-13 01:43:59 UTC
From: Michael Harnage
Topic: 1999 Message: 2075

How bout a 10K resister in parallel with the 3.9K
(giving about 2.8 or 2.9K). I know it's a little tight
but 103's are pretty common on circuit boards.
Everyone has a stash of old circuit boards to scavenge
from right? :)

-mike/w1mt

--- Steven Weber <kd1jv@...> wrote:

> Thankfully, the fix is pretty simple. We just have
> to rise the output level
> of the DDS a little. This is done by reducing the
> value of R15, the 3.9K
> resistor. Droping it down to 3.3K should do the
> trick in most cases. 2.7K
> would give some more margin. I don't have either of
> these values on hand,
> but will get some in case anyone needs them.
>

_____
Be a better sports nut! Let your teams follow you
with Yahoo Mobile. Try it now.
http://mobile.yahoo.com/sports;_ylt=At9_qDKvtAbMuh1G1SQtBI7ntAcJ

2076. Re: [AT_Sprint] Potentual problem with 15M transmit in 3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-13 02:00:00 UTC
From: WA0ITP
Topic: 1999 Message: 2076

Great idea Mike.

Stacking them sounds like a very elegant fix. Especially if R15 and the parts around it are already soldered in. How easy is that to do?

I love this radio stuff!
72 73
Terry, WAØITP
http://www.wa0dx.org/wa0itp
http://www.wa0dx.org
http://www.4sqrp.com/
----- Original Message -----
From: Michael Harnage
To: AT_Sprint@yahoogroups.com
Sent: Monday, November 12, 2007 7:43 PM
Subject: Re: [AT_Sprint] Potentual problem with 15M transmit in 3B

How bout a 10K resister in parallel with the 3.9K
(giving about 2.8 or 2.9K). I know it's a little tight
but 103's are pretty common on circuit boards.
Everyone has a stash of old circuit boards to scavenge
from right? :)

-mike/w1mt

--- Steven Weber <kd1jv@...> wrote:

> Thankfully, the fix is pretty simple. We just have
> to rise the output level
> of the DDS a little. This is done by reducing the
> value of R15, the 3.9K
> resistor. Droping it down to 3.3K should do the
> trick in most cases. 2.7K
> would give some more margin. I don't have either of
> these values on hand,
> but will get some in case anyone needs them.
>

Be a better sports nut! Let your teams follow you
with Yahoo Mobile. Try it now.
http://mobile.yahoo.com/sports;_ylt=At9_qDKvtAbMuh1G1SQtBI7ntAcJ

No virus found in this incoming message.
Checked by AVG Free Edition.
Version: 7.5.503 / Virus Database: 269.15.30/1125 - Release Date: 11/11/2007 9:50 PM

2077. Re: [AT_Sprint] Potentual problem with 15M transmit in 3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-13 02:57:39 UTC
From: Steven Weber
Topic: 1999 Message: 2077

>How bout a 10K resister in parallel with the 3.9K
>(giving about 2.8 or 2.9K). I know it's a little tight

That would work fine. In fact, I do have a lot of 10K's if you can't
salvage one from something.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2078. Re: [AT_Sprint] auto power off for ATS-3c?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-13 03:22:16 UTC
From: Steven Weber
Topic: 2074 Message: 2078

>I think I ruined my LiPo pack after I fell asleep with the rig powered and
did not disconnect it for the next day. LiPols are very sensitive in this
regard. They inflate and lose capacity.
>
Sorry to hear that.

>How about to use a 5V stabilizer with enable pin and switch the whole
analog part off after some period of inactivity? It would also be very
useful to switch the rig off after the battery falls under a defined
threshold.

The analog section doesn't really use much current. Its the DDS clock and
the DDS chip which consume the bulk of the rigs current.

I tried making a version of the rig which had an electronic on/off switch
to turn everything off but the processor. Main reason for this was so I
could implement a real time clock. It got a lot more complicated than you
would think at first. I never did get it to work right. But now that I
think about it again, maybe now I could with a different approch.

A simple auto low voltage disconnect circuit wouldn't be too hard to make.
It would only need a P channel power fet, a 2n7002 and a voltage reset
superviser chip.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2079. Re: auto power off for ATS-3c?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-13 04:34:38 UTC
From: radio_kx0r
Topic: 2074 Message: 2079

--- In AT_Sprint@yahoogroups.com, Vojtìch Bubník <bubnikv@...> wrote:

Vojtech,

If we use a protective PCB with a lithium pack, we are protected from overcharging, overdischarging, and overcurrent. These very small, low cost PCB's are available from suppliers who sell the cells and packs. I got some from batteryspace.com . It is dangerous to use lithium cells without these protective circuits - lithium ion cells are particularly dangerous if unprotected.

Carey Fuller
KX0R

>
> Hi Steve.
>
> I think I ruined my LiPo pack after I fell asleep with the rig powered and did not disconnect it for the next day. LiPols are very sensitive in this regard. They inflate and lose capacity.
>
> How about to use a 5V stabilizer with enable pin and switch the whole analog part off after some period of inactivity? It would also be very useful to switch the rig off after the battery falls under a defined threshold.
>
> 73, Vojtech OK1IAK
>

2080. Re: Potentual problem with 15M transmit in 3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-13 05:59:18 UTC
From: radio_kx0r
Topic: 1999 Message: 2080

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:

Steve,

Thanks for posting this so fast! Wow, I nearly fell out of my chair when I read this, I was so happy! I thought I was going to have to replace that DDS chip...

It's so nice when someone tells you your crisis is not your fault, and there's an easy way out! I really appreciate your clear explanation - it agrees with everything I observed, and it explains why the heat works so fast!

I tried 15K across R15, and the problem was greatly reduced. I had to get things hot with the embossing tool before the noise showed up this time.

I have two big questions still:

1) If the problem is mostly caused by the chip inductors drifting, what do you think about replacing them with small toroids? I have some of the smaller micrometals cores, and I can hit 1.5 uH with a core that will fit in the same space as those chip inductors. I even have some of the yellow type 6 material, which is very stable. Toroids might have a higher Q than chip inductors, so the filter might behave differently, especially since it's "on the edge" at 21 Mhz. It might even work better.

Is this a good idea? Should I try for 1.5 uH, or a little less? What happens if the inductors are too small and the filter's knee moves up in frequency? The nice thing about toroids is that we can adjust them a little.

2) What happens if R15 is too low? What are we trading off as we lower R15? Can the DDS be damaged, or does some new problem appear?

Thanks for your help with this tricky bug!

72/73
Carey Fuller
KX0R

> Carey, KX0R, discoverd a potentual problem when transmitting on 15 meters.
> He discovered that after a few minutes of transmitting, the output spectrum
> went all to hell. This is only a problem on 15 meters.
>

> I tried to duplicate the problem with my rig and after a solid 5
minutes of
> key down with 5 watts out, I failed to duplicate it. Then I put the
heat
> gun to the board and it became apparent.
>
> What is happening is this. The roll off of the DDS output filter is
> somewhat less than 21 MHz. If the ferrite chip inductors in the
filter get
> warm, thier value goes up. This can reduce the output of the filter
to the
> point the comparitor in the DDS doesn't have enough singal to work
with and
> becomes erratic.
>
> The extent of this problem is hard to judge. It depends on the
exact value
> of the inductors you happen to have and the operating tempature. If
your
> values are on the high side and your operating outside on a hot
summer day,
> there is likely to be a problem.
>
> One way to tell is to transmit into a dummy load and monitor the
output
> power. Heat the DDS filter area with a heat gun and see how hot you
have to
> get it before the output drops off significantly. If you have to
get it
> real hot, then your okay. If it only takes a little heat, then you
need to
> do a fix.
>
> Thankfully, the fix is pretty simple. We just have to rise the
output level
> of the DDS a little. This is done by reducing the value of R15, the
3.9K
> resistor. Droping it down to 3.3K should do the trick in most
cases. 2.7K
> would give some more margin. I don't have either of these values on
hand,
> but will get some in case anyone needs them.
>
>
>
>
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire

> http://kd1jv.qrpradio.com
>

2081. Re: [AT_Sprint] auto power off for ATS-3c?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-13 06:48:49 UTC
From: Manfred Reinhardt
Topic: 2074 Message: 2081

Hi All
this
link could be a solution
http://newenglandqrp.org/files/WM-2%20control.jpg

regards
vy72
Fred (DK1VD)
Steven Weber schrieb:
>
> >I think I ruined my LiPo pack after I fell asleep with the rig
> powered and
> did not disconnect it for the next day. LiPols are very sensitive in this
> regard. They inflate and lose capacity.
> >
> Sorry to hear that.
>
> >How about to use a 5V stabilizer with enable pin and switch the whole
> analog part off after some period of inactivity? It would also be very
> useful to switch the rig off after the battery falls under a defined
> threshold.
>
> The analog section doesn't really use much current. Its the DDS clock and
> the DDS chip which consume the bulk of the rigs current.
>
> I tried making a version of the rig which had an electronic on/off switch
> to turn everything off but the processor. Main reason for this was so I
> could implement a real time clock. It got a lot more complicated than you
> would think at first. I never did get it to work right. But now that I
> think about it again, maybe now I could with a different approch.
>
> A simple auto low voltage disconnect circuit wouldn't be too hard to make.
> It would only need a P channel power fet, a 2n7002 and a voltage reset
> superviser chip.
>
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com <http://kd1jv.qrpradio.com>
>
>

2082. Re: [AT_Sprint] auto power off for ATS-3c? Sorry

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-13 07:01:44 UTC
From: Manfred Reinhardt
Topic: 2074 Message: 2082

HI Group
sorry
dont use the 2N7000 insert a Type with more Power :-))
regards
Manfred
Manfred Reinhardt schrieb:
>
> Hi All
> this
> link could be a solution
> http://newenglandqrp.org/files/WM-2%20control.jpg
> <http://newenglandqrp.org/files/WM-2%20control.jpg>
>
> regards
> vy72
> Fred (DK1VD)
> Steven Weber schrieb:
> >
> > >I think I ruined my LiPo pack after I fell asleep with the rig
> > powered and
> > did not disconnect it for the next day. LiPols are very sensitive in
> this
> > regard. They inflate and lose capacity.
> > >
> > Sorry to hear that.
> >
> > >How about to use a 5V stabilizer with enable pin and switch the whole
> > analog part off after some period of inactivity? It would also be very
> > useful to switch the rig off after the battery falls under a defined
> > threshold.
> >
> > The analog section doesn't really use much current. Its the DDS
> clock and
> > the DDS chip which consume the bulk of the rigs current.
> >
> > I tried making a version of the rig which had an electronic on/off
> switch
> > to turn everything off but the processor. Main reason for this was so I
> > could implement a real time clock. It got a lot more complicated
> than you
> > would think at first. I never did get it to work right. But now that I
> > think about it again, maybe now I could with a different approch.
> >
> > A simple auto low voltage disconnect circuit wouldn't be too hard to
> make.

> > It would only need a P channel power fet, a 2n7002 and a voltage reset
> > superviser chip.
> >
> > 72,
> > Steve, KD1JV
> > "Melt Solder"
> > White Mountains of New Hampshire
> > http://kd1jv.qrpradio.com <http://kd1jv.qrpradio.com>
> <http://kd1jv.qrpradio.com <http://kd1jv.qrpradio.com>>
> >
> >
>
>

2083. Re: [AT_Sprint] Re: auto power off for ATS-3c?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-13 11:56:41 UTC
From: Vojtěch Bubník
Topic: 2074 Message: 2083

Hi Carrey.

> If we use a protective PCB with a lithium pack, we are protected from
> overcharging, overdischarging, and overcurrent. These very small,
> low cost PCB's are available from suppliers who sell the cells and
> packs.

I am using 2 cell 1.7Ah pack, that was designed for powering air plane model and I also use it for that purpose. The cells are never equipped by the usual the switch off circuit in the model, but usually the propeller regulator takes care of it. But you are right that it is wise to use it with the radio.

73, Vojtech OK1IAK

2084. Re: auto power off for ATS-3c?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-13 12:07:57 UTC
From: Bruce Beford
Topic: 2074 Message: 2084

--- In AT_Sprint@yahoogroups.com, Manfred Reinhardt <dk1vd@...> wrote:
>
> Hi All
> this
> link could be a solution
> http://newenglandqrp.org/files/WM-2%20control.jpg
>
> regards
> vy72
> Fred (DK1VD)

As the author of the article in question, I DO NOT recommend this type of ciruit to control the ATS rigs. The reason is due to the slow transition through the conduction point of the FET at the end of the discharge cycle. This leads to the load seeing a slowly dropping supply voltage, rather than a quick shut-off. This situation can lead to corruption of the EEPROM contents of some microcontrollers, in some cases. It is for this reason that I only recommend this cirucit for control of relatively simple, analog devices.

For LiPo pack protection, I also recommend the protection PC boards that have already been mentioned. They are very inexpensive, and protect the LiPo pack by disconnecting it from the load (or charger) if any single cell goes below 3.2 volts, or goes above 4.2 volts. I use them on all my LiPo packs.

72,
Bruce Beford, N1RX

2085. Re: [AT_Sprint] auto power off for ATS-3c?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-13 12:12:57 UTC
From: Vojtěch Bubník
Topic: 2074 Message: 2085

Hi Steve.

> The analog section doesn't really use much current. Its the DDS clock and
> the DDS chip which consume the bulk of the rigs current.

You are right, I forgot that.

I think if you suspend
- 5V regulator (a part with suspend pin will be needed)
- DDS oscillator (part with suspend pin will be needed)
- DDS (programmable)
- CPU (programmable)

the overall current will be next to nothing, probably around 0.5mA, which is 12mAh per day, 84mA per week. Probably not good enough for real time clock, but certainly good enough to save the battery. I think the current will consist mostly of quiescent current of the 3.3V stabilizer and current through the pullups.

> A simple auto low voltage disconnect circuit wouldn't be too hard to make.
> It would only need a P channel power fet, a 2n7002 and a voltage reset
> superviser chip.

I would prefer to control the low voltage by the CPU to be able to select battery type.

73, Vojtech OK1IAK

2086. Re: [AT_Sprint] Re: auto power off for ATS-3c?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-13 12:16:22 UTC
From: Vojtěch Bubník
Topic: 2074 Message: 2086

> For LiPo pack protection, I also recommend the protection PC boards
> that have already been mentioned. They are very inexpensive, and
> protect the LiPo pack by disconnecting it from the load (or charger)
> if any single cell goes below 3.2 volts, or goes above 4.2 volts. I
> use them on all my LiPo packs.

Those circuits are certainly useful, but they will not save you power if you fall asleep and find a flat battery in the morning. No radio fun during the rest of the trip.

73, Vojtech OK1IAK

2087. Re: [AT_Sprint] Re: auto power off for ATS-3c?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-13 12:50:39 UTC
From: Kurt Savegnago
Topic: 2074 Message: 2087

--- Bruce Beford <bruce.beford@...> wrote:

> --- In AT_Sprint@yahoogroups.com, Manfred Reinhardt
> <dk1vd@...> wrote:
> >
> > Hi All
> > this
> > link could be a solution
> > http://newenglandqrp.org/files/WM-2%20control.jpg
> >
> > regards
> > vy72
> > Fred (DK1VD)
>
> As the author of the article in question, I DO NOT
> recommend this
> type of ciruit to control the ATS rigs. The reason
> is due to the slow
> transition through the conduction point of the FET
> at the end of the
> discharge cycle. This leads to the load seeing a
> slowly dropping
> supply voltage, rather than a quick shut-off. This
> situation can lead
> to corruption of the EEPROM contents of some
> microcontrollers, in
> some cases. It is for this reason that I only
> recommend this cirucit
> for control of relatively simple, analog devices.
>
> For LiPo pack protection, I also recommend the
> protection PC boards
> that have already been mentioned. They are very
> inexpensive, and
> protect the LiPo pack by disconnecting it from the
> load (or charger)
> if any single cell goes below 3.2 volts, or goes
> above 4.2 volts. I
> use them on all my LiPo packs.
>
> 72,
> Bruce Beford, N1RX

Hi,

Could you post a link for the uneducated like
myself?
I have some other applications I could use them for
too.
Kurt Savegnago KC9LDH

2088. Re: [AT_Sprint] Re: auto power off for ATS-3c?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-13 13:39:51 UTC
From: Bill Noyce
Topic: 2074 Message: 2088

On 11/13/07, Kurt Savegnago <ksaves2@...> wrote:
>
> Could you post a link for the uneducated like
> myself?

Here's a page of protection boards. I used the PCB-S3A5-GS in a pack
I built from three 800mAh cells...
<http://www.batteryspace.com/index.asp?PageAction=VIEWCATS&Category=711>
-- Bill, AB1AV

2089. ATS-3B on 12m ??

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-13 14:47:02 UTC
From: John A. Evans - N0HJ
Topic: 2074 Message: 2089

Greetings all,

I suspect that Steve/KD1JV and Mike/W1MT could answer this one pretty fast, plus I suspect the answer is yes. I do want to run this by the experts before I start playing around.

If the DDS chip was replaced with a 75 MHz version, and the clock oscillator also replaced with a 75 MHz clock, would it be possible to put the ATS-3B on 12m, given the right module components and software changes? Are the modules simple double-sided boards? It sure would be nice to have yet another higher band for field work.

tnx es 72 - john - n0hj

2090. Re: auto power off for ATS-3c?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-13 15:18:57 UTC
From: Bruce Beford
Topic: 2074 Message: 2090

--- In AT_Sprint@yahoogroups.com, Vojtìch Bubník <bubnikv@...> wrote:
>
> > For LiPo pack protection, I also recommend the protection PC boards
> > that have already been mentioned. They are very inexpensive, and
> > protect the LiPo pack by disconnecting it from the load (or
charger)
> > if any single cell goes below 3.2 volts, or goes above 4.2 volts. I
> > use them on all my LiPo packs.
>
> Those circuits are certainly useful, but they will not save you power
if you fall asleep and find a flat battery in the morning. No radio fun
during the rest of the trip.
>
> 73, Vojtech OK1IAK
>

True, but at least the (expensive) LiPo pack would not be damaged.
-Bruce N1RX

2091. Re: [AT_Sprint] Re: auto power off for ATS-3c?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-13 15:43:53 UTC
From: Kurt Savegnago
Topic: 2074 Message: 2091

--- Bill Noyce <WBNoyce@...> wrote:

> On 11/13/07, Kurt Savegnago <ksaves2@...>
> wrote:
> >
> > Could you post a link for the uneducated like
> > myself?
>
> Here's a page of protection boards. I used the
> PCB-S3A5-GS in a pack
> I built from three 800mAh cells...
>
<http://www.batteryspace.com/index.asp?PageAction=VIEWCATS&Category=711>
> -- Bill, AB1AV

Thanks for the link. This is really going to help me
from gorking some packs in some other applications.

Kurt KC9LDH

Slackware user since 1994

2092. Re: [AT_Sprint] Re: Potentual problem with 15M transmit in 3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-13 16:09:26 UTC
From: Steven Weber
Topic: 1999 Message: 2092

>1) If the problem is mostly caused by the chip inductors drifting,
>what do you think about replacing them with small toroids? I have
>
I would not recommend doing that. Toriods are not as "self shielding" as
many people think. Due to the fairly close proximity to the PA output
filter, there is a real possibility that the transmit signal will get into
the DDS filter. It will also likely be out of phase with the signal from
the DDS chip, possibly causing some strange oscillation problems.

>2) What happens if R15 is too low? What are we trading off as we
>lower R15? Can the DDS be damaged, or does some new problem appear?
>
I'm not sure what happens if R15 is too low. Making R15 smaller in
resistance makes the output amplitude go up, so there is some increase in
overall current comsumption.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2093. Re: [AT_Sprint] ATS-3B on 12m ??

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-13 16:38:49 UTC
From: Steven Weber
Topic: 2074 Message: 2093

> If the DDS chip was replaced with a 75 MHz version, and the clock
>oscillator also replaced with a 75 MHz clock, would it be possible to
>put the ATS-3B on 12m, given the right module components and software
>changes? Are the modules simple double-sided boards? It sure would be
>nice to have yet another higher band for field work.

75 MHz clocks don't seem to be commonly available. I tired a 80 MHz clock with a 9834 I had from before AD changed the clock speed spec for the chip and it worked fine. With the 80 MHz clock, I was able to make the rig work on both 12 and 10 meters.

However, there were two issues. One, the rig's current went up to over 50 ma on receive due to the high current of the 80 MHz clock and fast clocking of the DDS chip. Second, the transmitter output filters were very touchy to adjust. Very small changes in the spacing of the wire on the cores made a huge change in output power.

Even though it was possible to make the rig work on 12 and 10, I decided it wasn't worth the current penalty and the expense of yet another two filter boards, especially since it will still be some years before these bands are of much use.

It made more sense to only go up to 15 meters, which only added 10 ma to the current compaired to the 3A and these bands had more chance of seeing use in the near future.

Anyway, I'm working on a small SSB rig which will cover 20 to 10 meters, though at the moment, I'm in no rush to get it done. Just want to have it ready for when these bands start to become active again :-)
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2094. Re: [AT_Sprint] Re: auto power off for ATS-3c?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-13 17:42:34 UTC
From: w9ya@qrparci.net
Topic: 2074 Message: 2094

> --- In AT_Sprint@yahoogroups.com, Manfred Reinhardt <dk1vd@...> wrote:
>>
>> Hi All
>> this
>> link could be a solution
>> http://newenglandqrp.org/files/WM-2%20control.jpg
>>
>> regards
>> vy72
>> Fred (DK1VD)
>
> As the author of the article in question, I DO NOT recommend this type
> of ciruit to control the ATS rigs. The reason is due to the slow
> transition through the conduction point of the FET at the end of the
> discharge cycle. This leads to the load seeing a slowly dropping
> supply voltage, rather than a quick shut-off. This situation can lead
> to corruption of the EEPROM contents of some microcontrollers, in some
> cases. It is for this reason that I only recommend this cirucit for
> control of relatively simple, analog devices.
>
> For LiPo pack protection, I also recommend the protection PC boards
> that have already been mentioned. They are very inexpensive, and
> protect the LiPo pack by disconnecting it from the load (or charger) if
> any single cell goes below 3.2 volts, or goes above 4.2 volts. I use
> them on all my LiPo packs.
>
> 72,
> Bruce Beford, N1RX

Hey Bruce and the gang;

What are you recommending for a charger ?

Vy 72;

Bob
w9ya

2095. Re: [AT_Sprint] ATS-3B on 12m ??

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-13 18:16:29 UTC
From: Michael Harnage
Topic: 2074 Message: 2095

Easy to do in the firmware. In addition, to the
increased current consumption and low pass filter
touchiness mentioned by Steve, you may also have to
look at:

1. The elliptical filter out of the DDS.

2. The switch that controls the PA (74AC*** vice
74HC***)

Not sure if both of these would have to change or not.
Haven't done the analysis properly...

-mike/w1mt

--- "John A. Evans - N0HJ" <jaevans@...> wrote:

>
> If the DDS chip was replaced with a 75 MHz
> version, and the clock
> oscillator also replaced with a 75 MHz clock, would
> it be possible to
> put the ATS-3B on 12m, given the right module
> components and software
> changes? Are the modules simple double-sided
> boards? It sure would be
> nice to have yet another higher band for field work.

Be a better pen pal.
Text or chat with friends inside Yahoo! Mail. See how. http://overview.mail.yahoo.com/

2096. Re: [AT_Sprint] ATS-3B on additional bands

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-13 19:04:22 UTC
From: Bill Noyce
Topic: 2096 Message: 2096

While we're thinking about additional bands, what would it take to get on 160 meters, or 60 meters (assuming the FCC grants the petition to open it to CW & narrow digital modes)?
No issues with the DDS for these modes, I assume. It might be nice for the firmware to enforce the channelization on 60m. Does the choke on the PA collectors have enough inductance for 160m? How much room is there in the range of voltages used for identifying band modules?
The 160m filters would probably use T-1 (blue) toroids.
-- Bill, AB1AV

2097. Re: auto power off for ATS-3c?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-13 19:14:59 UTC
From: Bruce Beford
Topic: 2074 Message: 2097

--- In AT_Sprint@yahoogroups.com, <w9ya@...> wrote:
>

> Hey Bruce and the gang;
>
> What are you recommending for a charger ?
>
> Vy 72;
>
> Bob
> w9ya
>

I ONLY recommend a charger designed specifically for LiPo batteries.
You can find them at all the places that sell LiPo cells and packs.
You must use a charger that is set for the specific number of cells
in the pack.

For my cells/PC boards/ chargers, I have had good service from

www.all-battery.com

They have a charger on sale right now for $23.00:

http://www.all-battery.com/index.asp?PageAction=VIEWPROD&ProdID=478

I use this one, and it works well.
72,
Bruce N1RX

2098. Re: [AT_Sprint] Re: auto power off for ATS-3c?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-13 22:06:29 UTC
From: Kurt Savegnago
Topic: 2074 Message: 2098

--- Bruce Beford <bruce.beford@...> wrote:

> --- In AT_Sprint@yahoogroups.com, <w9ya@...> wrote:
> >
>
> > Hey Bruce and the gang;
> >
> > What are you recommending for a charger ?
> >
> > Vy 72;
> >
> > Bob
> > w9ya
> >
>
> I ONLY recommend a charger designed specifically for
> LiPo batteries.
> You can find them at all the places that sell LiPo
> cells and packs.
> You must use a charger that is set for the specific
> number of cells
> in the pack.
>
> For my cells/PC boards/ chargers, I have had good
> service from
>
> www.all-battery.com
>
> They have a charger on sale right now for $23.00:
>
>
http://www.all-battery.com/index.asp?PageAction=VIEWPROD&ProdID=478
>
> I use this one, and it works well.
> 72,
> Bruce N1RX
>

That is a nice economical model. I already had a
Triton battery charger that really does it all.
http://www.electrifly.com/chargers/gpmm3153.html

Takes care of all my batteries for R/C stuff and I
already had it on hand when I became a licensed
amateur.

Kurt KC9LDH

Slackware user since 1994

2099. Re: [AT_Sprint] ATS-3B on additional bands

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-13 23:02:47 UTC
From: Steven Weber
Topic: 2096 Message: 2099

There is no technical problem for 160. Making the filter board is a physcial challenge. I get my cores from Diz, and he only carries the T50-1 size. Which is what you'll need anyway to fit enough turns on the core.

I also see no real point in doing 160. After all this is suppost to be a backpacking rig! Even 80 is marginal for that. 160 would be just crazy!
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2100. Re: [AT_Sprint] ATS-3B on additional bands

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-13 23:51:48 UTC
From: w9ya@qrparci.net
Topic: 2096 Message: 2100

> There is no technical problem for 160. Making the filter board is a
> physcial challenge. I get my cores from Diz, and he only carries the
> T50-1 size. Which is what you'll need anyway to fit enough turns on the
> core.
>
> I also see no real point in doing 160. After all this is suppost to be a
> backpacking rig! Even 80 is marginal for that. 160 would be just crazy!
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com

Uh yeah....agreed.

Bob
w9ya

Liviu Librescu - ?n veci pomenirea lui.
(May his memory be eternal.)

2101. best battery

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-14 00:00:15 UTC
From: ak3f
Topic: 2101 Message: 2101

what's the preferred LiPo battery with the ATS rig being optimized for
9 wolts? a three cell 11.1 v pak? i see some are using 2 cell paks also.

any recommendations?
thanks
mike ak3f

2102. RE: [AT_Sprint] ATS-3B on additional bands

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-14 00:25:11 UTC
From: Dale Putnam
Topic: 2096 Message: 2102

I can understand backpacking... as in walking... but then there are the very few (?) that would pack in....
as in horses. And 160 antennas are really not hard to pack in a saddle bag. So.... if it isn't too hard, maybe a few suggestions as to what to do with what to make it to 160? Please?
I'd trade a photo of me, camp, mountains, horses and antenna.... planned for next summer trip.--... ...--Dale - WC7S in Wy

To: AT_Sprint@yahoogroups.comFrom: w9ya@...: Tue, 13 Nov 2007 18:51:48 -0500Subject: Re: [AT_Sprint] ATS-3B on additional bands

> There is no technical problem for 160. Making the filter board is a> physcial challenge. I get my cores from Diz, and he only carries the> T50-1 size. Which is what you'll need anyway to fit enough turns on the> core.>> I also see no real point in doing 160. After all this is suppost to be a> backpacking rig! Even 80 is marginal for that. 160 would be just crazy!> 72,> Steve, KD1JV> "Melt Solder"> White Mountains of New Hampshire> http://kd1jv.qrpradio.comUh yeah....agreed.Bobw9yaLiviu Librescu - În veci pomenirea lui.(May his memory be eternal.)

_____
Climb to the top of the charts! Play Star Shuffle: the word scramble challenge with star power.
http://club.live.com/star_shuffle.aspx?icid=starshuffle_wlmailtextlink_oct

2103. RE: [AT_Sprint] ATS-3B on additional bands

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-14 01:51:19 UTC
From: john
Topic: 2096 Message: 2103

I think if this rig was only being used for backpacking, there'd be about 5 units sold ! :-)

John K5MO

2104. Re: ATS-3B on additional bands

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-14 01:57:10 UTC
From: radio_kx0r
Topic: 2096 Message: 2104

--- In AT_Sprint@yahoogroups.com, Dale Putnam <daleputnam@...> wrote:
Dale,

Every year I operate FD in WY, and I enjoy it as much as anything. I have actually tried operating 80 CW for FD, and it is unusual to get more than a few contacts, if I even hear anyone through the QRN. Most of the ones I hear are QRO, and few of them can hear a QRP station. 80 is so bad for FD that I've never even listened to 160 during FD.

I don't live far from you, and I know that a lot of things are better up in the open spaces of Wyoming than down here in semi-urban Colorado - but I think you have just as much summer QRN as we do, and I'm so unimpressed by 160 in the summer that I would never even consider trying it from a trailside spot or campsite. I think Steve has stretched reality pretty far to include 80M in the ATS series. It's there because some of us use these rigs for sprints and events like Run for the Bacon, where 80M will actually yield some QSO's during quiet nights in the colder months.

I'd be interested to see how many people reading this thread in this group have actually made an 80 meter QSO portable and QRP, with any radio. I have done this, and I think it's rough. 160??

Of course, it would be possible to work one of the 160M CW contests in the winter, camping somewhere, with QRP - the thought has occurred, because a large antenna could be put up at special places outdoors. On the other hand, I've actually operated QRP while winter camping in the snow, in a tent, at temperatures near zero, and I don't like much more than a couple of hours of it. 160? I know you guys are tough in Wyoming - and your winters are really rough. How would you keep an antenna up in all that wind?

I think it would easier to pack a larger rig on that horse than to wind the toroids required to put an ATS rig on 160.

Carey Fuller
KX0R
>
> I can understand backpacking... as in walking... but then there are the very few (?) that would pack in....
> as in horses. And 160 antennas are really not hard to pack in a saddle bag. So.... if it isn't too hard, maybe a few suggestions as to what to do with what to make it to 160? Please?
> I'd trade a photo of me, camp, mountains, horses and antenna.... planned for next summer trip.--... ...--Dale - WC7S in Wy

>
>
> To: AT_Sprint@...: w9ya@...: Tue, 13 Nov 2007 18:51:48 -
0500Subject: Re: [AT_Sprint] ATS-3B on additional bands
>
>
>
>
> > There is no technical problem for 160. Making the filter board is
a> physcial challenge. I get my cores from Diz, and he only carries
the> T50-1 size. Which is what you'll need anyway to fit enough turns
on the> core.>> I also see no real point in doing 160. After all this
is suppost to be a> backpacking rig! Even 80 is marginal for that.
160 would be just crazy!> 72,> Steve, KD1JV> "Melt Solder"> White
Mountains of New Hampshire> http://kd1jv.qrpradio.comUh
yeah....agreed.Bobw9yaLiviu Librescu - În veci pomenirea lui.(May his
memory be eternal.)
>
>
>
>
>
>
> _____
> Climb to the top of the charts! Play Star Shuffle: the word
scramble challenge with star power.
> http://club.live.com/star_shuffle.aspx?
icid=starshuffle_wlmailtextlink_oct
>

2105. Re: Pocket PC for ATS-3B (Jornada 7XX not currently recommended)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-14 02:02:13 UTC
From: kc7fys
Topic: 1447 Message: 2105

--- In AT_Sprint@yahoogroups.com, Vojtìch Bubník <bubnikv@...> wrote:
>
> Hello.
>
> It is hard to recommend a particular device. There are a lot of them on the market and it is up to your taste. If you are lucky, you may buy Jornada 720 on e-bay for hundred bucks. Jornada 720 is quite old design running Windows CE 3.0, no more manufactured, but it has a decent internal keyboard and 640x240 display. I still support Jornada 720, because some HAMs use it.
>
> If you have more questions, please subscribe to hampocket at yahoogroups. Search the archive first and place the questions there.
>

This message caught my eye a few weeks ago, and I ran out and got me a Jornada 720. It looks nice, gets remarks, runs 1.0.9 PocketDigi--but currently cannot transmit PSK31, as far as I know. Stand by for possible bugfixes, but unless I am mistaken this unit is NOT compatible with the ATS3B for PSK31 at this time.
Just making that clear, because the message above sorta led me to believe the opposite was the case.
Oops!
Jonathan KC7FYS

2108. 160m

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-14 02:25:56 UTC
From: Tim Keene
Topic: 2106 Message: 2108

I think Steve made a logical and sound decision not putting 160m in the ATS-3B. Playing the devil's advocate for a moment, Some folks like to use their QRP rig occasionally at home as the main rig and work QRP exclusively for a while as I do myself. For some maybe it's their only rig because they live in a apartment complex and are worried about TVI or whatever. In that case, having the extra bands including 160m would be pretty cool. I probably would not use it myself but the option would be nice.
Just food for thought and my 2 cents worth.
Tim - K5DEZ

2109. RE: [AT_Sprint] Re: ATS-3B on additional bands

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-14 02:48:56 UTC
From: Dale Putnam
Topic: 2096 Message: 2109

Hi Carey,
yep, it is fun, and sometimes it is rather interesting when the wind blows the antenna down into or around the horses. They have all learned what happens to them with wire... electric fences and all. So... with antennas they get rather unhappy... so.. one of two choices... either tie antenna down or take it down.
So.. I have tied it to the saddle on the trailer... or to the saddle horn, as it is setting up under a tree.
And the noise isn't so bad, I use rx antennas for summer too. That always helps, and as far as fd goes, I usually get covered with signals on everything down to 160, then after 10 pm, that picks up pretty well too.
No, the rate doesn't stay nearly as high as when I get talked into either 100 or 1kw. But, it isn't as much fun for me either. Yes, I could take a bigger rig, but i kinda like to eat too. and have room for other stuff too.
Last trip out was up to about 8500 in the Green River Lakes area, then on up to spike camp at 10+, in a tent, temp was chilly, something past froze the water bucket... but it was quiet, and nice on 80, with a dipole into trees. I've used a vertical too, in the same trees.... but that doesn't work dx very good... mountain rock don't make for good ground field. And I don't really want to spread out 30 or 40 radials to make it work nice either.
So.. 160 in the summer would work, high, quiet... well.. with a rx antenna, and try for some ZL or VKs,
oh, what is the rx antenna? Well that is really easy... all the left over wire... or whatever... laid out.... over the rocks and not real high. Preferable away from where the horses are... and take that up at night... the elk don't like trippin over it. They have been known to tangle in it... and it ain't no fun to chase a radio down the elk trail at dark thirty... with only a pair of boots and a hat... thank goodness no one had a flash or camera...
--... ...--Dale - WC7S in Wy

To: AT_Sprint@yahoogroups.comFrom: careyfuller@...: Wed, 14 Nov 2007 01:57:10 +0000Subject: [AT_Sprint] Re: ATS-3B on additional bands

--- In AT_Sprint@yahoogroups.com, Dale Putnam <daleputnam@...> wrote:Dale,Every year I operate FD in WY, and I enjoy it as much as anything. I have actually tried operating 80 CW for FD, and it is unusual to get more than a few contacts, if I even hear anyone through the QRN. Most of the ones I hear are QRO, and few of them can hear a QRP station. 80 is so bad for FD that I've never even listened to 160 during FD.I don't live far from you, and I know that a lot of things are better up in the open spaces of Wyoming than down here in semi-urban Colorado - but I think you have just as much summer QRN as we do, and I'm so unimpressed by 160 in the summer that I would never even consider trying it from a trailside spot or campsite. I think Steve has stretched reality pretty far to include 80M in the ATS series. It's there because some of us use these rigs for sprints and events like Run for the Bacon, where 80M will actually yield some QSO's during quiet nights in the colder months.I'd be interested to see how many people reading this thread in this group have actually made an 80 meter QSO portable and QRP, with any radio. I have done this, and I think it's rough. 160?? Of course, it would be possible to work one of the 160M CW

contests in the winter, camping somewhere, with QRP - the thought has occurred, because a large antenna could be put up at special places outdoors. On the other hand, I've actually operated QRP while winter camping in the snow, in a tent, at temperatures near zero, and I don't like much more than a couple of hours of it. 160? I know you guys are tough in Wyoming - and your winters are really rough. How would you keep an antenna up in all that wind? I think it would easier to pack a larger rig on that horse than to wind the toroids required to put an ATS rig on 160.Carey FullerKX0R> > I can understand backpacking... as in walking... but then there are the very few (?) that would pack in....> as in horses. And 160 antennas are really not hard to pack in a saddle bag. So.... if it isn't too hard, maybe a few suggestions as to what to do with what to make it to 160? Please?> I'd trade a photo of me, camp, mountains, horses and antenna.... planned for next summer trip.--... ...--Dale - WC7S in Wy> > > To: AT_Sprint@...: w9ya@...: Tue, 13 Nov 2007 18:51:48 -0500Subject: Re: [AT_Sprint] ATS-3B on additional bands> > > > > > There is no technical problem for 160. Making the filter board is a> physcial challenge. I get my cores from Diz, and he only carries the> T50-1 size. Which is what you'll need anyway to fit enough turns on the> core.>> I also see no real point in doing 160. After all this is suppost to be a> backpacking rig! Even 80 is marginal for that. 160 would be just crazy!> 72,> Steve, KD1JV> "Melt Solder"> White Mountains of New Hampshire> http://kd1jv.qrpradio.comUh yeah....agreed.Bobw9yaLiviu Librescu - În veci pomenirea lui.(May his memory be eternal.) > > > > > > > _____> Climb to the top of the charts! Play Star Shuffle: the word scramble challenge with star power.> http://club.live.com/star_shuffle.aspx?icid=starshuffle_wlmailtextlink_oct>

_____
Windows Live Hotmail and Microsoft Office Outlook – together at last. Get it now.
http://office.microsoft.com/en-us/outlook/HA102225181033.aspx?pid=CL100626971033

2110. RE: [AT_Sprint] Re: ATS-3B on additional bands

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-14 02:48:54 UTC
From: Dale Putnam
Topic: 2096 Message: 2110

Hi Carey,
yep, it is fun, and sometimes it is rather interesting when the wind blows the antenna down into or around the horses. They have all learned what happens to them with wire... electric fences and all. So... with antennas they get rather unhappy... so.. one of two choices... either tie antenna down or take it down.
So.. I have tied it to the saddle on the trailer... or to the saddle horn, as it is setting up under a tree.
And the noise isn't so bad, I use rx antennas for summer too. That always helps, and as far as fd goes, I usually get covered with signals on everything down to 160, then after 10 pm, that picks up pretty well too.
No, the rate doesn't stay nearly as high as when I get talked into either 100 or 1kw. But, it isn't as much fun for me either. Yes, I could take a bigger rig, but i kinda like to eat too. and have room for other stuff too.
Last trip out was up to about 8500 in the Green River Lakes area, then on up to spike camp at 10+, in a tent, temp was chilly, something past froze the water bucket... but it was quiet, and nice on 80, with a dipole into trees. I've used a vertical too, in the same trees.... but that doesn't work dx very good... mountain rock don't make for good ground field. And I don't really want to spread out 30 or 40 radials to make it work nice either.
So.. 160 in the summer would work, high, quiet... well.. with a rx antenna, and try for some ZL or VKs,
oh, what is the rx antenna? Well that is really easy... all the left over wire... or whatever... laid out.... over the rocks and not real high. Preferable away from where the horses are... and take that up at night... the elk don't like trippin over it. They have been known to tangle in it... and it ain't no fun to chase a radio down the elk trail at dark thirty... with only a pair of boots and a hat... thank goodness no one had a flash or camera...
--... ...--Dale - WC7S in Wy

To: AT_Sprint@yahoogroups.comFrom: careyfuller@...: Wed, 14 Nov 2007 01:57:10 +0000Subject: [AT_Sprint] Re: ATS-3B on additional bands

--- In AT_Sprint@yahoogroups.com, Dale Putnam <daleputnam@...> wrote:Dale,Every year I operate FD in WY, and I enjoy it as much as anything. I have actually tried operating 80 CW for FD, and it is unusual to get more than a few contacts, if I even hear anyone through the QRN. Most of the ones I hear are QRO, and few of them can hear a QRP station. 80 is so bad for FD that I've never even listened to 160 during FD.I don't live far from you, and I know that a lot of things are better up in the open spaces of Wyoming than down here in semi-urban Colorado - but I think you have just as much summer QRN as we do, and I'm so unimpressed by 160 in the summer that I would never even consider trying it from a trailside spot or campsite. I think Steve has stretched reality pretty far to include 80M in the ATS series. It's there because some of us use these rigs for sprints and events like Run for the Bacon, where 80M will actually yield some QSO's during quiet nights in the colder months.I'd be interested to see how many people reading this thread in this group have actually made an 80 meter QSO portable and QRP, with any radio. I have done this, and I think it's rough. 160?? Of course, it would be possible to work one of the 160M CW

contests in the winter, camping somewhere, with QRP - the thought has occurred, because a large antenna could be put up at special places outdoors. On the other hand, I've actually operated QRP while winter camping in the snow, in a tent, at temperatures near zero, and I don't like much more than a couple of hours of it. 160? I know you guys are tough in Wyoming - and your winters are really rough. How would you keep an antenna up in all that wind? I think it would easier to pack a larger rig on that horse than to wind the toroids required to put an ATS rig on 160.Carey FullerKX0R> > I can understand backpacking... as in walking... but then there are the very few (?) that would pack in....> as in horses. And 160 antennas are really not hard to pack in a saddle bag. So.... if it isn't too hard, maybe a few suggestions as to what to do with what to make it to 160? Please?> I'd trade a photo of me, camp, mountains, horses and antenna.... planned for next summer trip.--... ...--Dale - WC7S in Wy> > > To: AT_Sprint@...: w9ya@...: Tue, 13 Nov 2007 18:51:48 -0500Subject: Re: [AT_Sprint] ATS-3B on additional bands> > > > > > There is no technical problem for 160. Making the filter board is a> physcial challenge. I get my cores from Diz, and he only carries the> T50-1 size. Which is what you'll need anyway to fit enough turns on the> core.>> I also see no real point in doing 160. After all this is suppost to be a> backpacking rig! Even 80 is marginal for that. 160 would be just crazy!> 72,> Steve, KD1JV> "Melt Solder"> White Mountains of New Hampshire> http://kd1jv.qrpradio.comUh yeah....agreed.Bobw9yaLiviu Librescu - În veci pomenirea lui.(May his memory be eternal.) > > > > > > > _____> Climb to the top of the charts! Play Star Shuffle: the word scramble challenge with star power.> http://club.live.com/star_shuffle.aspx?icid=starshuffle_wlmailtextlink_oct>

_____
Peek-a-boo FREE Tricks & Treats for You!
http://www.reallivemoms.com?ocid=TXT_TAGHM&loc=us

2111. RE: [AT_Sprint] Re: ATS-3B on additional bands

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-14 03:01:28 UTC
From: Dale Putnam
Topic: 2096 Message: 2111

Someone else wrote a very nice note to me, I lost it. And I apologize. Please resend. Thanks,--... ...--Dale - WC7S in Wy

---

Climb to the top of the charts! Play Star Shuffle: the word scramble challenge with star power.
http://club.live.com/star_shuffle.aspx?icid=starshuffle_wlmailtextlink_oct

2112. Re: ATS-3B on additional bands (Re: Camping rig)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-14 03:38:45 UTC
From: kc7fys
Topic: 2096 Message: 2112

--- In AT_Sprint@yahoogroups.com, john <johnmb@...> wrote:
>
> I think if this rig was only being used for backpacking, there'd be
about 5
> units sold ! :-)

As for me... it's more of a parkbench/train to the beach rig. I don't
camp much, and when I do, it's sorta family time. Also the consumption
of Merlot doesn't do much for my CW skills. Hi.
Jonathan

2113. Nice design, JN1GLB. (See photo section)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-14 04:19:48 UTC
From: kc7fys
Topic: 2113 Message: 2113

FB rig, JN1GLB,
May I ask: What is the black device to the left of your ATS3B? Also,
your 6-単3形 cell pack--that's new to me.
Also, I have never tried the chocolate Altoids.
Jonathan 7J1AWL

2114. Re: best battery

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-14 04:44:27 UTC
From: radio_kx0r
Topic: 2101 Message: 2114

--- In AT_Sprint@yahoogroups.com, "ak3f" <mbhayden@...> wrote:

Mike,

If you use 2 lithium cells you'll start out just over 8 volts and drop to something above 6V. With 3 cells you start just above 12Vv and drop to something above 9. Please look at your battery's data sheet to determine the maximum charge voltage and the minimum discharge voltage. Going above the maximum charge voltage may be dangerous, may shorten battery life, and should trip the protective circuit. Going too low will damage the battery and should trip the protective circuit. Don't cheat - use a protective circuit with lithium cells!

The ATS-3 radios run nicely anywhere from about 5.5V to 12V. Running at the high end requires more attention to providing a correct match. Read through previous posts for more information - there's plenty.

Good luck

Carey Fuller
KX0R

> what's the preferred LiPo battery with the ATS rig being optimized for
> 9 wolts? a three cell 11.1 v pak? i see some are using 2 cell paks also.
>
> any recommendations?
> thanks
> mike ak3f
>

2115. Re: [AT_Sprint] Nice design, JN1GLB. (See photo section)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-14 04:51:33 UTC
From: makoto kasahara
Topic: 2113 Message: 2115

Jonathan-san, Thanks FB commant.
Black device is Antenna Tuner.
The circuit is about same as SLT(see qrpkits.com).

Chocolate ALTOIDS is not so bad.

Makoto / JN1GLB

----- Original Message ----
From: kc7fys <kc7fys@...>
To: AT_Sprint@yahoogroups.com
Sent: Wednesday, November 14, 2007 1:19:48 PM
Subject: [AT_Sprint] Nice design, JN1GLB. (See photo section)

FB rig, JN1GLB,
May I ask: What is the black device to the left of your ATS3B? Also,
your 6-単3& #24418; cell pack--that's new to me.
Also, I have never tried the chocolate Altoids.
Jonathan 7J1AWL

_____
Get easy, one-click access to your favorites.
Make Yahoo! your homepage.
http://www.yahoo.com/r/hs

2116. Re: ATS-3B on additional bands

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-14 04:54:44 UTC
From: radio_kx0r
Topic: 2096 Message: 2116

--- In AT_Sprint@yahoogroups.com, Dale Putnam <daleputnam@...> wrote:

Dale,

Thanks for your message - it popped up twice, and I enjoyed reading it twice! I hadn't thought about horses and wire, or elk at night, but I believe you. When I did FD in WY, I shared National Forest land with some cows - I got a little nervous when some of them came through - I had a long run of ladder line strung through the low branches of some pine trees - they left it alone though.

Maybe I should try a receiving antenna next year...

72/73

Carey Fuller
KX0R

>
> Hi Carey,
> yep, it is fun, and sometimes it is rather interesting when the wind blows the antenna down into or around the horses. They have all learned what happens to them with wire... electric fences and all. So... with antennas they get rather unhappy... so.. one of two choices... either tie antenna down or take it down.
> So.. I have tied it to the saddle on the trailer... or to the saddle horn, as it is setting up under a tree.
> And the noise isn't so bad, I use rx antennas for summer too. That always helps, and as far as fd goes, I usually get covered with signals on everything down to 160, then after 10 pm, that picks up pretty well too.
> No, the rate doesn't stay nearly as high as when I get talked into either 100 or 1kw. But, it isn't as much fun for me either. Yes, I could take a bigger rig, but i kinda like to eat too. and have room for other stuff too.
> Last trip out was up to about 8500 in the Green River Lakes area, then on up to spike camp at 10+, in a tent, temp was chilly, something past froze the water bucket... but it was quiet, and nice on 80, with a dipole into trees. I've used a vertical too, in the same trees.... but that doesn't work dx very good... mountain rock don't make for good ground field. And I don't really want to spread out 30 or 40 radials to make it work nice either.
> So.. 160 in the summer would work, high, quiet... well.. with a rx antenna, and try for some ZL or VKs,
> oh, what is the rx antenna? Well that is really easy... all the left over wire... or whatever... laid out.... over the rocks and not

real high. Preferable away from where the horses are... and take that up at night... the elk don't like trippin over it. They have been known to tangle in it... and it ain't no fun to chase a radio down the elk trail at dark thirty... with only a pair of boots and a hat... thank goodness no one had a flash or camera...
> --... ...--Dale - WC7S in Wy
>

2117. Re: ATS-3B on additional bands

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-14 05:02:19 UTC
From: radio_kx0r
Topic: 2096 Message: 2117

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
Steve,

You could do what Elecraft does - offer the basic rig that works several bands, and then offer various upgrades and additional bands as add-ons for more money. That's how they get a KX1 over $500.

Actually I hope you never do this.

Carey KX0R

> There is no technical problem for 160. Making the filter board is a
> physcial challenge. I get my cores from Diz, and he only carries the T50-1
> size. Which is what you'll need anyway to fit enough turns on the core.
>
> I also see no real point in doing 160. After all this is suppost to be a
> backpacking rig! Even 80 is marginal for that. 160 would be just crazy!
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com
>

2118. 15M DDS Filter Heating Problem

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-14 05:24:22 UTC
From: radio_kx0r
Topic: 2118 Message: 2118

I finished Steve's suggested change to help the DDS work correctly on 15M if the components get hot. I took the suggestion made here and added a 10K (103) resistor right on top of R15 3.9K (392). This parallel pair yields 2.8K. I tested the rig with some hot air, and the problem I was seeing is no longer apparent, even with everything hotter than I expect to have it.

Adding the 10K resistor is the easiest thing you can do to lower R15.

My rig's current consumption on receive with no signal is now just over 37 mA. I think it was about 35 mA before the change in R15. I added another 10K in parallel just for a test (this gives 2.2K for R15), and the current increased about 2 mA, from about 37 mA to about 39 mA. On 15M these currents are almost 1 mA higher.

So 10K across R15 is the fix for me.

If you never plan to use 15M, and your priority is maximum battery life, you may choose not to change R15.

I tested all the bands at different power levels and everything's nice now. I'm ready to box it up and get on the air some more!

Thanks again Steve!

KX0R
Carey Fuller

2119. Re: [AT_Sprint] Re: auto power off for ATS-3c?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-14 05:38:47 UTC
From: w9ya@qrparci.net
Topic: 2074 Message: 2119

> --- In AT_Sprint@yahoogroups.com, <w9ya@...> wrote:
>>
>
>> Hey Bruce and the gang;
>>
>> What are you recommending for a charger ?
>>
>> Vy 72;
>>
>> Bob
>> w9ya
>>
>
> I ONLY recommend a charger designed specifically for LiPo batteries.
> You can find them at all the places that sell LiPo cells and packs. You
> must use a charger that is set for the specific number of cells in the
> pack.
>
> For my cells/PC boards/ chargers, I have had good service from
>
> www.all-battery.com
>
> They have a charger on sale right now for $23.00:
>
> http://www.all-battery.com/index.asp?PageAction=VIEWPROD&ProdID=478
>
> I use this one, and it works well.
> 72,
> Bruce N1RX

Yeah Bruce;

This outfit seems to have great prices...Thanks for the recommendation.

Vy 72;

Bob
w9ya

Liviu Librescu - ?n veci pomenirea lui.
(May his memory be eternal.)

2120. 17m / 15m Overcurrent at 12V

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-14 14:16:01 UTC
From: Gary Raney
Topic: 2074 Message: 2120

I've gotten my ATS-3B mounted and am tuning in the last of the filter modules and testing the performance of the rig. I noticed that with 12V drive th PA overcurrent protector will flip, but if I put 10ohms in series with the ATS to drop some voltage it operates fine.

Has anyone else had this issue? 40 / 30 / 20m operate on 12V just fine.

Gary

2121. Re: [AT_Sprint] Re: auto power off for ATS-3c?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-14 15:03:36 UTC
From: Kurt Savegnago
Topic: 2074 Message: 2121

-
>
> > For my cells/PC boards/ chargers, I have had good
> service from
> >
> > www.all-battery.com
> >
> > They have a charger on sale right now for $23.00:
> >
> >
>
http://www.all-battery.com/index.asp?PageAction=VIEWPROD&ProdID=478
> >
> > I use this one, and it works well.
> > 72,
> > Bruce N1RX
>
> Yeah Bruce;
>
> This outfit seems to have great prices...Thanks for
> the recommendation.
>
> Vy 72;
>
> Bob
> w9ya

OK,

But buyer beware at all battery. I ordered some
transmitter packs albeit they were NiMh packs and
absolutely none of them came close to their
2000mah rating. I gently cycled them and then did
some
C/10 charge cycles and C/5 cycles and could was lucky
to get them to 1300 to 1500mah.
Granted they were cheap and run the R/C transmitters
longer than stock packs but are nowhere near their
alleged rating.
Oh BTW, I bought six packs and not a single one
performed as rated so I don't believe it is a fluke.
They were of the "Tenergy" brand.
YMMV with the lithium cells.

Kurt KC9LDH

Slackware user since 1994

2122. Re: [AT_Sprint] 160m

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-14 15:20:35 UTC
From: Kurt Savegnago
Topic: 2122 Message: 2122

--- Tim Keene <K5DEZ@...> wrote:

> I think Steve made a logical and sound decision not
> putting 160m in the
> ATS-3B. Playing the devil's advocate for a moment,
> Some folks like to
> use their QRP rig occasionally at home as the main
> rig and work QRP
> exclusively for a while as I do myself. For some
> maybe it's their only
> rig because they live in a apartment complex and are
> worried about TVI
> or whatever. In that case, having the extra bands
> including 160m would
> be pretty cool.
> Just food for thought and my 2 cents worth.
> K5DEZ

Gosh,

That's my only intention once I get it done.
Just have a mini-station with a QBSA to run from
home. If I need more power, will connect up to
an HF packer AMP, add a more powerful antenna tuner
and
one is in business. In my estimation, couple this
to a stealth antenna and it is a perfect combination
for home/base use in an antenna unfriendly atmosphere.
Only thing left to worry about would be TVI. That
would
probably only be an issue running the amp and where
I'm
at, less of an issue because folks are on cable.

Kurt KC9KLDH

Slackware user since 1994

2123. Red Plastic for the Display

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-14 16:45:55 UTC
From: radio_kx0r
Topic: 2123 Message: 2123

If you need to clean the red plastic that's supplied for covering the LED display, don't do what I did and try cleaning it with isopropyl alcohol. The red dye comes off, and the plastic turns foggy. Only one side seems vulnerable, so you can test a corner and decide what to do.

72/73

Carey Fuller
KX0R

2124. Re: [AT_Sprint] Red Plastic for the Display

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-14 17:00:48 UTC
From: Kurt Savegnago
Topic: 2123 Message: 2124

Go to Wal-Mart and get a bottle of the liquid glasses
cleaner in the pharmacy section generally by the eye
solutions. I find this works very well on clear
plastic in radios and very safe.

I do admit though, I had an old pair of prescription
glasses with plastic lenses. I wore them to spray
paint and they got "hazed" by some of the paint in the

air. I figured, "What the heck." I took lacquer
thinner to them and by gosh they cleaned up very
nicely.

I believe though with the cheaper clean windows on
electronic parts, stick with the gentle lens cleaners.

Kurt KC9LDH

--- radio_kx0r <careyfuller@...> wrote:

> If you need to clean the red plastic that's supplied
> for covering the
> LED display, don't do what I did and try cleaning it
> with isopropyl
> alcohol. The red dye comes off, and the plastic
> turns foggy. Only one
> side seems vulnerable, so you can test a corner and
> decide what to do.
>
> 72/73
>
> Carey Fuller
> KX0R
>
>
>
>
> Yahoo! Groups Links
>
>
>
>
>

Slackware user since 1994

2125. Re: [AT_Sprint] Re: auto power off for ATS-3c?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-14 17:06:35 UTC
From: w9ya@qrparci.net
Topic: 2074 Message: 2125

```
>
> -
>>
>> > For my cells/PC boards/ chargers, I have had good
>> service from
>> >
>> > www.all-battery.com
>> >
>> > They have a charger on sale right now for $23.00:
>> >
>> >
>>
> http://www.all-battery.com/index.asp?PageAction=VIEWPROD&ProdID=478
>> >
>> > I use this one, and it works well.
>> > 72,
>> > Bruce N1RX
>>
>> Yeah Bruce;
>>
>> This outfit seems to have great prices...Thanks for
>> the recommendation.
>>
>> Vy 72;
>>
>> Bob
>> w9ya
>
> OK,
>
> But buyer beware at all battery. I ordered some
> transmitter packs albeit they were NiMh packs and
> absolutely none of them came close to their
> 2000mah rating. I gently cycled them and then did
> some
> C/10 charge cycles and C/5 cycles and could was lucky
> to get them to 1300 to 1500mah.
> Granted they were cheap and run the R/C transmitters
> longer than stock packs but are nowhere near their
> alleged rating.
> Oh BTW, I bought six packs and not a single one
> performed as rated so I don't believe it is a fluke.
> They were of the "Tenergy" brand.
> YMMV with the lithium cells.
>
```

> Kurt KC9LDH
>
> Slackware user since 1994

OH MY !!!

Tnxs fer the info OM

es

Vy 72;

de

Bob
w9ya

2126. Re: [AT_Sprint] Re: auto power off for ATS-3c?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-14 17:16:58 UTC
From: Kurt Savegnago
Topic: 2074 Message: 2126

(Snip for Brevity's sake0
> > OK,
> >
> > But buyer beware at all battery. I ordered some
> > transmitter packs albeit they were NiMh packs and
> > absolutely none of them came close to their
> > 2000mah rating. I gently cycled them and then did
> > some
> > C/10 charge cycles and C/5 cycles and could was
> lucky
> > to get them to 1300 to 1500mah.
> > Granted they were cheap and run the R/C
> transmitters
> > longer than stock packs but are nowhere near their
> > alleged rating.
> > Oh BTW, I bought six packs and not a single one
> > performed as rated so I don't believe it is a
> fluke.
> > They were of the "Tenergy" brand.
> > YMMV with the lithium cells.
> >
> > Kurt KC9LDH
> >
> > Slackware user since 1994
>
>
> OH MY !!!
>
> Tnxs fer the info OM
>
> es
>
> Vy 72;
>
> de
>
> Bob
> w9ya

Hi,

I want to make it clear it was with the NiMh packs
with connectors for R/C radios.
The Lithium or Lipro packs might be a different/better
story. They are reliable and sent me my order

promptly. Got some rechargeable 8.4V transistor
batteries from them and they perform as advertised.

Kurt KC9LDH

Slackware user since 1994

2127. Re: Red Plastic for the Display

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-14 17:27:13 UTC
From: radio_kx0r
Topic: 2123 Message: 2127

--- In AT_Sprint@yahoogroups.com, Kurt Savegnago <ksaves2@...> wrote:
Kurt,

This is a good tip - thanks!

I'm going to go to the next level - I found some clear red acrylic
locally, and for a few bucks I'll get a lifetime supply.

Carey KX0R

> Go to Wal-Mart and get a bottle of the liquid glasses
> cleaner in the pharmacy section generally by the eye
> solutions. I find this works very well on clear
> plastic in radios and very safe.
>
> I do admit though, I had an old pair of prescription
> glasses with plastic lenses. I wore them to spray
> paint and they got "hazed" by some of the paint in the
>
> air. I figured, "What the heck." I took lacquer
> thinner to them and by gosh they cleaned up very
> nicely.
>
> I believe though with the cheaper clean windows on
> electronic parts, stick with the gentle lens cleaners.
>
> Kurt KC9LDH
>
> --- radio_kx0r <careyfuller@...> wrote:
>
> > If you need to clean the red plastic that's supplied
> > for covering the
> > LED display, don't do what I did and try cleaning it
> > with isopropyl
> > alcohol. The red dye comes off, and the plastic
> > turns foggy. Only one
> > side seems vulnerable, so you can test a corner and
> > decide what to do.
> >
> > 72/73
> >
> > Carey Fuller
> > KX0R
> >
> >
> >

> >
> > Yahoo! Groups Links
> >
> >
> >
> >
> >
>
>
> Slackware user since 1994
>

2128. RE: [AT_Sprint] Re: ATS-3B on additional bands

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-15 02:51:39 UTC
From: Dale Putnam
Topic: 2096 Message: 2128

Hi Carey,
The only thing with the open wire line, low across the tree limbs... is if the cows, or elk smell the sweaty handprints... they will chew the wire.. looking for salt. Unless, they have access to salt easily somewhere else. I've even had squirres, mice and other associated salt miners chew wire for salt.
I'm pleased that you enjoyed reading. Tis fun to share the Wilderness or Forest with the natives.
And talk to the world at the same time.
Long live marshmellows and smores. --... ...--Dale - WC7S in Wy

To: AT_Sprint@yahoogroups.comFrom: careyfuller@...: Wed, 14 Nov 2007 04:54:44 +0000Subject: [AT_Sprint] Re: ATS-3B on additional bands

--- In AT_Sprint@yahoogroups.com, Dale Putnam <daleputnam@...> wrote:Dale,Thanks for your message - it popped up twice, and I enjoyed reading it twice! I hadn't thought about horses and wire, or elk at night, but I believe you. When I did FD in WY, I shared National Forest land with some cows - I got a little nervous when some of them came through - I had a long run of ladder line strung through the low branches of some pine trees - they left it alone though.Maybe I should try a receiving antenna next year...72/73Carey FullerKX0R> > Hi Carey,> yep, it is fun, and sometimes it is rather interesting when the wind blows the antenna down into or around the horses. They have all learned what happens to them with wire... electric fences and all. So... with antennas they get rather unhappy... so.. one of two choices... either tie antenna down or take it down. > So.. I have tied it to the saddle on the trailer... or to the saddle horn, as it is setting up under a tree. > And the noise isn't so bad, I use rx antennas for summer too. That always helps, and as far as fd goes, I usually get covered with signals on everything down to 160, then after 10 pm, that picks up pretty well too. > No, the rate doesn't stay nearly as high as when I get talked into either 100 or 1kw. But, it isn't as much fun for me either. Yes, I could take a bigger rig, but i kinda like to eat too. and have room for other stuff too.> Last trip out was up to about 8500 in the Green River Lakes area, then on up to spike camp at 10+, in a tent, temp was chilly, something past froze the water bucket... but it was quiet, and nice on 80, with a dipole into trees. I've used a vertical too, in the same trees.... but that doesn't work dx very good... mountain rock don't make for good ground field. And I don't really want to spread out 30 or 40 radials to make it work nice either. > So.. 160 in the summer would work, high, quiet... well.. with a rx antenna, and try for some ZL or VKs, > oh, what is the rx antenna? Well that is really easy... all the left over wire... or whatever... laid out.... over the rocks and not real high. Preferable away from where the horses are... and take that up at night... the elk don't like trippin over it. They have been known to tangle in it... and it ain't no fun to chase a radio down the elk trail at dark thirty... with only a pair of boots and a hat... thank goodness no one had a flash or camera...> --... ...--Dale - WC7S in Wy>

_____
Help yourself to FREE treats served up daily at the Messenger Café. Stop by today.
http://www.cafemessenger.com/info/info_sweetstuff2.html?ocid=TXT_TAGLM_OctWLtagline

2129. Re: Simple programmer interface

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-15 17:30:52 UTC
From: Jim Fraser
Topic: 1838 Message: 2129

Steve,

After doing the firmware upgrade, do we have to do the reference
oscillator and local oscillator calibration again?

Jim K6JF

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
>
> Try changing all the 22K resistors to 220 ohm. That seems to do the
trick
> here on both PC's running the Version 3.4 and version 2.3 IAR.
>
>
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com
>

2130. Re: [AT_Sprint] Potentual problem with 15M transmit in 3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-15 18:46:57 UTC
From: Lutz Bergner
Topic: 1999 Message: 2130

Hi Steven,

many Thanks for that brilliant fix. My moded ATS3 shows the same issue
on 15m. Have had no time so far to further investigate it.

72s

Lutz,DM2LB

Am Montag, den 12.11.2007, 16:48 -0500 schrieb Steven Weber:
> need to
> do a fix.
>
> Thankfully, the fix is pretty simple. We just have to rise the output
> level
> of the DDS a little. This is done by reducing the value of R15, the
> 3.9K
> resistor. Droping it down to 3.3K should do the trick in most cases.
> 2.7K
> would give some more margin. I don't have either of these values on
> hand,
> but will get some in case anyone needs them.

2131. Re: [AT_Sprint] 160m

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-15 18:59:29 UTC
From: Lutz Bergner
Topic: 2106 Message: 2131

Hi Tim

160m for the ATS3B is not a big problem if someone would mod the firmware. I use my moded ATS3 on 160m on regular basis. There is a slight issue with the comparator on that low frequencies limiting the output a bit. But it works fine so far. Cores for the filters are wound on blue amidon T30 cores.
The RX is excellent there as you can hear DX very close to strong stations. With my 2.5W from 9V I worked all around europe with my doublet 12m up used as a Tee - Ant against my heating system.

72

Lutz DM2LB ex DL2HRP

Am Mittwoch, den 14.11.2007, 02:25 +0000 schrieb Tim Keene:
> I think Steve made a logical and sound decision not putting 160m in
> the
> ATS-3B. Playing the devil's advocate for a moment, Some folks like to
> use their QRP rig occasionally at home as the main rig and work QRP
> exclusively for a while as I do myself. For some maybe it's their
> only
> rig because they live in a apartment complex and are worried about
> TVI
> or whatever. In that case, having the extra bands including 160m
> would
> be pretty cool. I probably would not use it myself but the option
> would
> be nice.
> Just food for thought and my 2 cents worth.
> Tim - K5DEZ

2132. Re: [AT_Sprint] Re: Simple programmer interface

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-15 19:05:01 UTC
From: Michael Harnage
Topic: 1838 Message: 2132

Yes.

-mike/w1mt

--- Jim Fraser <jimf53@...> wrote:

> Steve,
>
> After doing the firmware upgrade, do we have to do
> the reference
> oscillator and local oscillator calibration again?
>
> Jim K6JF
>
>
> --- In AT_Sprint@yahoogroups.com, Steven Weber
> <kd1jv@...> wrote:
> >
> > Try changing all the 22K resistors to 220 ohm.
> That seems to do the
> trick
> > here on both PC's running the Version 3.4 and
> version 2.3 IAR.
> >
> >
> > 72,
> > Steve, KD1JV
> > "Melt Solder"
> > White Mountains of New Hampshire
> > http://kd1jv.qrpradio.com
> >
>
>
>
>
>
> Yahoo! Groups Links
>
>
>
>
>

Get easy, one-click access to your favorites.
Make Yahoo! your homepage.

http://www.yahoo.com/r/hs

2133. Re: Simple programmer interface

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-15 19:15:40 UTC
From: Jim Fraser
Topic: 1838 Message: 2133

Thanks, Mike.

--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:
>
> Yes.
>
> -mike/w1mt
>
> --- Jim Fraser <jimf53@...> wrote:
>
> > Steve,
> >
> > After doing the firmware upgrade, do we have to do
> > the reference
> > oscillator and local oscillator calibration again?
> >
> > Jim K6JF
> >
> >
> > --- In AT_Sprint@yahoogroups.com, Steven Weber
> > <kd1jv@> wrote:
> > >
> > > Try changing all the 22K resistors to 220 ohm.
> > That seems to do the
> > trick
> > > here on both PC's running the Version 3.4 and
> > version 2.3 IAR.
> > >
> > >
> > > 72,
> > > Steve, KD1JV
> > > "Melt Solder"
> > > White Mountains of New Hampshire
> > > http://kd1jv.qrpradio.com
> > >
> >
> >
> >
> >
> >
> > Yahoo! Groups Links
> >
> >
> >
> >

> >
>
>
>
>

> Get easy, one-click access to your favorites.
> Make Yahoo! your homepage.
> http://www.yahoo.com/r/hs
>

2134. Re: Simple programmer interface

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-15 20:44:18 UTC
From: Dave
Topic: 1838 Message: 2134

I think it might be more accurate to say it depends. Mike's ATS-3/3A firmware does require recalibration after an update because it uses the programmer to write defaults directly to the nonvolatile data memory. The programming operation will fail if the programming software is not configured to rewrite the defaults, so it must be performed.

On the other hand, Steve's 3A and 3B firmware does not use the programmer to write defaults directly to memory. The executing code examines the memory and only reloads defaults if it appears that the nonvolatile data memory is blank (erased). Whether or not recalibration is required depends on whether or not the programming software is configured to erase the data memory during the firmware update.

I can't say regarding earlier ATS versions, I haven't looked at them.

Dave, WA3OFF

--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:
>
> Yes.
>
> -mike/w1mt
>
> --- Jim Fraser <jimf53@...> wrote:
>
> > Steve,
> >
> > After doing the firmware upgrade, do we have to do
> > the reference
> > oscillator and local oscillator calibration again?
> >
> > Jim K6JF

2135. Re: [AT_Sprint] Re: Simple programmer interface

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-15 19:38:34 UTC
From: Steven Weber
Topic: 1838 Message: 2135

>After doing the firmware upgrade, do we have to do the reference
>oscillator and local oscillator calibration again?
>
Maybe not. The earlierversions of IAR C-spy errased the whole chip. Later versions allows you to tell it not to errase the information memory section. I forget off hand if that option menu comes up automatically or if you have to find it.

Also, disregrad any error messages which come up after the firmware has been loaded into the chip.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2136. Re: Simple programmer interface

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-15 21:12:21 UTC
From: Jim Fraser
Topic: 1838 Message: 2136

Thanks for the additional info, Dave. My question was in regards to the ATS-3B. I just wanted to know if I had to hold off packaging the rig until after I get a chance to upgrade the F/W. I want to complete the setup and play aroound before upgrading.

Could you answer another question? I am trying to calibrate the local oscillator by monitoring TP2. It is stated to note when the signal starts to decrease, but going either tine up or tune down the signal amplitude is constant. However, the tone frequency in the headphones does rise and fall a step on the button presses. I also tried looking directly at pin 1 of U3 and saw the same results.

Am I interpreting the procedure correctly? Is the signal amplitude at TP2 supposed to rise and fall?

Jim K6JF

2137. Re: [AT_Sprint] Re: Simple programmer interface

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-15 21:36:02 UTC
From: Michael Harnage
Topic: 1838 Message: 2137

One more thing about redoing the calibration. If the firmware changes any thing in the flash memory (such as location or whatever) you should load the flash from the programmer and recalibrate. Steve doesn't change the flash stuff often but I have been known to move things around a little. :) I would always opt to recalibrate the rig after reloading the firmware. If you are doing an update of mine or Steve's firmware then you will be ok by remembering the clicks you used on the previous version. Don't try this across the version because I use different steps during calibration. (At least for the 3a they were different).

I am putting the finishing touches on my 3B firmware and hope to get it out in the next month..... We shall see......

As far as calibration, here is what I do:

I use a computer and seperate receiver. Basically, you tweak the cap on the main board to put the filter where you want it (generally centered on 600Hz). Then, you put the TP1 signal on WWV's carrier on the seperate receiver to get oscillator calibrated. Last, I put the tone on the same 600Hz spot that I centered the filter in the first step. This involves connecting the computer to the ATS rig, then the seperate receiver, then back to the ATS rig for each step. I have more detailed instructions on my website (they are for the 3 so ignore references to the transformer).

Doing it this way makes my sidetone to match the annunciation tone and it makes zerobeating a snap.

-mike/w1mt

--- Jim Fraser <jimf53@...> wrote:

> Thanks for the additional info, Dave. My question
> was in regards to
> the ATS-3B. I just wanted to know if I had to hold
> off packaging the
> rig until after I get a chance to upgrade the F/W. I
> want to complete
> the setup and play aroound before upgrading.

>
> Could you answer another question? I am trying to
> calibrate the local
> oscillator by monitoring TP2. It is stated to note
> when the signal
> starts to decrease, but going either tine up or tune
> down the signal
> amplitude is constant. However, the tone frequency
> in the headphones
> does rise and fall a step on the button presses. I
> also tried looking
> directly at pin 1 of U3 and saw the same results.
>
> Am I interpreting the procedure correctly? Is the
> signal amplitude at
> TP2 supposed to rise and fall?
>
> Jim K6JF
>
>
>

Never miss a thing. Make Yahoo your home page.
http://www.yahoo.com/r/hs

2138. Interesting 3B Band Module Problem

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-16 04:17:16 UTC
From: Jim Fraser
Topic: 2138 Message: 2138

My 30M module is recognized by my ATS-3B as a 40m module and my 40M module is seen as an 80m module. I verified that I have the correct resistors on these modules. With the module removed I measured the resistance between pins 3 and 5 and the got 9.79K for the 30m module and 21.6K for the 40 meter module, looks OK. The other modules were properly recognized.

On top of this I immediately get an E as soon as I key up into my NorCal dummy load. I also tried my 300w dummy and it tripped as well. I was using the 20m module, the RX trimmers were peaked, and the power source was a 9v battery at about 8.85 volts.

I didn't expect to have so much difficulty with this rig. I thought I could have it completed by the upcoming holiday, but now it looks like I will be spending some of it debugging and checking more solder joints.

72 de
Jim K6JF

2139. Re: [AT_Sprint] Interesting 3B Band Module Problem

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-16 11:34:58 UTC
From: Michael Harnage
Topic: 2138 Message: 2139

For the band sensing double check the resistor pack orientation. If that's fine you can just plug a 10K or 22K resistor into the 3 and 5 pin locations and power up and see what the rig senses. If the plain resistor's are OK start looking at the filter boards for shorts across pads...

After fixing the band sensing problem, if your using a typical rectangular 9V battery try a more stout power source and see if the tripping stops.

-mike/w1mt

--- Jim Fraser <jimf53@...> wrote:

> My 30M module is recognized by my ATS-3B as a 40m
> module and my 40M
> module is seen as an 80m module. I verified that I
> have the correct
> resistors on these modules. With the module removed
> I measured the
> resistance between pins 3 and 5 and the got 9.79K
> for the 30m module
> and 21.6K for the 40 meter module, looks OK. The
> other modules were
> properly recognized.
>
> On top of this I immediately get an E as soon as I
> key up into my
> NorCal dummy load. I also tried my 300w dummy and it
> tripped as well. I
> was using the 20m module, the RX trimmers were
> peaked, and the power
> source was a 9v battery at about 8.85 volts.
>
> I didn't expect to have so much difficulty with this
> rig. I thought I
> could have it completed by the upcoming holiday, but
> now it looks like
> I will be spending some of it debugging and checking
> more solder
> joints.
>
> 72 de
> Jim K6JF
>

>
>
>
> Yahoo! Groups Links
>
>
>
>
>

Be a better pen pal.
Text or chat with friends inside Yahoo! Mail. See how. http://overview.mail.yahoo.com/

2140. Re: [AT_Sprint] Interesting 3B Band Module Problem

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-16 15:03:43 UTC
From: Bill Noyce
Topic: 2138 Message: 2140

For the band-recognition problem, double check that R44 is 22k (223). It's on the same side as the buttons, just above the LED display. For the transmit problem, check the circuitry around U12. Does it happen with every band module?
-- Bill, AB1AV

On 11/15/07, Jim Fraser <jimf53@...> wrote:
>
> My 30M module is recognized by my ATS-3B as a 40m module and my 40M
> module is seen as an 80m module. I verified that I have the correct
> resistors on these modules. With the module removed I measured the
> resistance between pins 3 and 5 and the got 9.79K for the 30m module
> and 21.6K for the 40 meter module, looks OK. The other modules were
> properly recognized.
>
> On top of this I immediately get an E as soon as I key up into my
> NorCal dummy load. I also tried my 300w dummy and it tripped as well. I
> was using the 20m module, the RX trimmers were peaked, and the power
> source was a 9v battery at about 8.85 volts.
>
> I didn't expect to have so much difficulty with this rig. I thought I
> could have it completed by the upcoming holiday, but now it looks like
> I will be spending some of it debugging and checking more solder
> joints.
>
> 72 de
> Jim K6JF

2141. Re: [AT_Sprint] Interesting 3B Band Module Problem

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-16 15:26:16 UTC
From: Atsuhiro SODA
Topic: 2138 Message: 2141

The judgment circuit of the band module is simple.
If resistance value is right, how will when I examine
voltage regulator? U9 and U10 are the same package.
Do not you make a mistake?

Atsuhiro Soda/JP1HYN

2142. Re: Interesting 3B Band Module Problem

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-16 17:44:20 UTC
From: Jim Fraser
Topic: 2138 Message: 2142

Thanks for the feedback everyone. I'll try these suggestions tonight.

The current trips on transmit on 80, 20, 17 and 15m. I did not try 30
& 40 due to the module recognition problem.

I was using the small square 9v battery. I do have a 6 cell AA
battery holder, so I'll have to pick up some batteries on the way
home from work.

Jim K6JF

--- In AT_Sprint@yahoogroups.com, Atsuhiro SODA <asoda@...> wrote:
>
> The judgment circuit of the band module is simple.
> If resistance value is right, how will when I examine
> voltage regulator? U9 and U10 are the same package.
> Do not you make a mistake?
>
> Atsuhiro Soda/JP1HYN
>

2143. Re: [AT_Sprint] Interesting 3B Band Module Problem

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-16 17:44:55 UTC
From: Steven Weber
Topic: 2138 Message: 2143

>My 30M module is recognized by my ATS-3B as a 40m module and my 40M
>module is seen as an 80m module.

40 coming up as 80 would imply the band select resistor is open, likely a bad solder connection to it or the pins on the plug. 30 showing as 40 might also be a bad solder connection, showing a little more resistance than it should. Higher resistance = lower band.

>
>On top of this I immediately get an E as soon as I key up into my
>NorCal dummy load. I also tried my 300w dummy and it tripped as well.

Check the connections to the 680 ohm resistor. If this is floating, it would take very little current to trip the reset.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2144. EFHW L tuner

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-16 18:16:37 UTC
From: Steven Weber
Topic: 2138 Message: 2144

I've had one of those Altoids chewing gum tins kicking around here for awhile and been wondering what to build into it all that time. The other day I thought to try fitting a L tuner into it. (do they still sell them? Haven't noticed recently)

I was able to more or less flatten out the curved bottom with a hammer, so now a piece of copper clad board sits mostly flat into the bottom.

A resistive SWR bridge and right angle slide switch take up about 1/4 of the length of the tin. A polycon variable is more or less in the middle and there is enough room left for another right angle switch and a couple of toroids. I figure on making it a two band tuner, 40 and 20.

Basically, its the same design as the ALT tuner, but half the size and a little less flexable. Its not quite finished (need to figure out the inductor values). I'll post a picture when its done.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2145. Re: [AT_Sprint] EFHW L tuner

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-16 18:45:32 UTC
From: n0tu/Steve
Topic: 2138 Message: 2145
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2146. Re: EFHW L tuner

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-16 20:03:16 UTC
From: radio_kx0r
Topic: 2138 Message: 2146

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
Steve,

This sounds cool. I'd be the first to admit that a small specific
tuner would be useful for use in the woods. I like BLT's, but they
large.

72
KX0R
Carey Fuller

>
> I've had one of those Altoids chewing gum tins kicking around here
for
> awhile and been wondering what to build into it all that time. The
other
> day I thought to try fitting a L tuner into it. (do they still sell
them?
> Haven't noticed recently)
>
> I was able to more or less flatten out the curved bottom with a
hammer, so
> now a piece of copper clad board sits mostly flat into the bottom.
>
> A resistive SWR bridge and right angle slide switch take up about
1/4 of
> the length of the tin. A polycon variable is more or less in the
middle and
> there is enough room left for another right angle switch and a
couple of
> toroids. I figure on making it a two band tuner, 40 and 20.
>
> Basically, its the same design as the ALT tuner, but half the size
and a
> little less flexable. Its not quite finished (need to figure out the
> inductor values). I'll post a picture when its done.
>
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com
>

2147. Re: EFHW L tuner

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-16 20:12:13 UTC
From: radio_kx0r
Topic: 2138 Message: 2147

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:

That Specialty Bottle website offers some small tin boxes that look
nice for little tuners:

http://www.specialtybottle.com/index.asp

The THN2 is 2.5" L X 2.0" W X 0.5" D and costs $.64 each in small
quantity.

This is the same place that has the unpainted Altoids-size tins THN4.
Some of the larger tins look like they would work for putting the rig
and a tuner in one box.

KX0R
Carey Fuller

> I've had one of those Altoids chewing gum tins kicking around here
for
> awhile and been wondering what to build into it all that time. The
other
> day I thought to try fitting a L tuner into it. (do they still sell
them?
> Haven't noticed recently)
>
> I was able to more or less flatten out the curved bottom with a
hammer, so
> now a piece of copper clad board sits mostly flat into the bottom.
>
> A resistive SWR bridge and right angle slide switch take up about
1/4 of
> the length of the tin. A polycon variable is more or less in the
middle and
> there is enough room left for another right angle switch and a
couple of
> toroids. I figure on making it a two band tuner, 40 and 20.
>
> Basically, its the same design as the ALT tuner, but half the size
and a
> little less flexable. Its not quite finished (need to figure out the
> inductor values). I'll post a picture when its done.
>
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire

> http://kd1jv.qrpradio.com
>

2148. Re: Interesting 3B Band Module Problem

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-16 20:20:46 UTC
From: radio_kx0r
Topic: 2138 Message: 2148

> should. Higher resistance = lower band.

Steve,

I think you meant "Higher resistance = lower frequency band". The
numbers of meters do get larger, which could be confusing.

I found that I couldn't get the band recognition to work really well on
80M until I put 100K in for RF1. With no resistor, I was getting "E"
even after waiting a while. Someone else pointed this out. The 100K
seems to make the circuit recognize the module much faster.

Are you cool with this change?

Thanks,

Carey Fuller
KX0R

>
> >
> >On top of this I immediately get an E as soon as I key up into my
> >NorCal dummy load. I also tried my 300w dummy and it tripped as
well.
>
> Check the connections to the 680 ohm resistor. If this is floating, it
> would take very little current to trip the reset.
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com
>

2149. Re: Interesting 3B Band Module Problem

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-17 04:38:54 UTC
From: Jim Fraser
Topic: 2138 Message: 2149

I switched the power supply to 6 AA batteries for tonight's testing instead of the square 9v battery.

>>> My 30M module is recognized by my ATS-3B as a 40m module and my 40M module is seen as an 80m module. <<<

As suggested I stuck a 22K resistor (40m) into pins 3 and 5 of the band module socket, but the 3B still sees 80m. I verified the proper values were installed for R44 as well as R35-R38 and touched up the solder joints. But the problem persists.

>>> I immediately get an 'E' as soon as I key up into my NorCal dummy load. <<<

I verifed the values of components and touched up the solder joints in the Current Detector circuit including the 680 ohm resistor Steve mentioned. The result was unchanged. I switched to a straight key and found that I could key down for quite a while (10 to 15 sec) with no tripping. But as soon as I released the key I got the 'E'.

I also noticed that the voltage read on the NorCal dummy load was 0 vdc, no power output. Since I had recently built the dummy load and have not used it, I dug up my HiMite-20 QRP rig and the dummy load showed 350mw output which confirms what I saw on a borrowed QRP wattmeter some time ago.

I did notice about a 20v spike in voltage at the dummy load when I released the key, but probably just noise.

Oh well, tomorrow is another day. Think I will try removing the above mentioned band module resistors to measure the values out of circuit, replace the SIP pins on the 40/30 modules, and replace the band module socket if the problem persists.

Jim K6JF

--- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@...> wrote:
>
> > should. Higher resistance = lower band.
>
> Steve,
>
> I think you meant "Higher resistance = lower frequency band". The
> numbers of meters do get larger, which could be confusing.

>
> I found that I couldn't get the band recognition to work really
well on
> 80M until I put 100K in for RF1. With no resistor, I was
getting "E"
> even after waiting a while. Someone else pointed this out. The
100K
> seems to make the circuit recognize the module much faster.
>
> Are you cool with this change?
>
> Thanks,
>
> Carey Fuller
> KX0R
>
> >
> > >
> > >On top of this I immediately get an E as soon as I key up into
my
> > >NorCal dummy load. I also tried my 300w dummy and it tripped as
> well.
> >
> > Check the connections to the 680 ohm resistor. If this is
floating, it
> > would take very little current to trip the reset.
> > 72,
> > Steve, KD1JV
> > "Melt Solder"
> > White Mountains of New Hampshire
> > http://kd1jv.qrpradio.com
> >
>

2150. Re: Interesting 3B Band Module Problem

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-17 06:42:33 UTC
From: radio_kx0r
Topic: 2138 Message: 2150

--- In AT_Sprint@yahoogroups.com, "Jim Fraser" <jimf53@...> wrote:

Jim,

Did you go through the procedure in the manual to get to this point?
In particular, do the two linear regulators read 3.5 and 5.o volts,
and you've verified they're not mixed up (swapped)?

I doubt there's anything wrong with the SIP pins or the band sense
resistors. You can test those with a meter on the pins (3 and 5) and
verify the path on each module.

You might try measuring all the voltages on the controller (U6,
MPS430) - see the chart in the manual.

If the rig thinks a 40M module is an 80M module, it should transmit
signals for the 80M band; but if that filter is really for 40M, you
won't get correct operation of the final stage, to say the least.

Did you check the operation of the keying mosfet Q6 per the
procedure, and then have you installed L3?

Just asking the obvious - you may be past that point.

72,
KX0R
Carey Fuller

> I switched the power supply to 6 AA batteries for tonight's testing
> instead of the square 9v battery.
>
> >>> My 30M module is recognized by my ATS-3B as a 40m module and my
> 40M module is seen as an 80m module. <<<
>
> As suggested I stuck a 22K resistor (40m) into pins 3 and 5 of the
> band module socket, but the 3B still sees 80m. I verified the
proper
> values were installed for R44 as well as R35-R38 and touched up the
> solder joints. But the problem persists.
>
> >>> I immediately get an 'E' as soon as I key up into my NorCal
dummy
> load. <<<
>
> I verifed the values of components and touched up the solder joints
> in the Current Detector circuit including the 680 ohm resistor
Steve

> mentioned. The result was unchanged. I switched to a straight key
and
> found that I could key down for quite a while (10 to 15 sec) with
no
> tripping. But as soon as I released the key I got the 'E'.
>
> I also noticed that the voltage read on the NorCal dummy load was 0
> vdc, no power output. Since I had recently built the dummy load and
> have not used it, I dug up my HiMite-20 QRP rig and the dummy load
> showed 350mw output which confirms what I saw on a borrowed QRP
> wattmeter some time ago.
>
> I did notice about a 20v spike in voltage at the dummy load when I
> released the key, but probably just noise.
>
> ----
>
> Oh well, tomorrow is another day. Think I will try removing the
above
> mentioned band module resistors to measure the values out of
circuit,
> replace the SIP pins on the 40/30 modules, and replace the band
> module socket if the problem persists.
>
> Jim K6JF
>
> --- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@>
> wrote:
> >
> > > should. Higher resistance = lower band.
> >
> > Steve,
> >
> > I think you meant "Higher resistance = lower frequency band".
The
> > numbers of meters do get larger, which could be confusing.
> >
> > I found that I couldn't get the band recognition to work really
> well on
> > 80M until I put 100K in for RF1. With no resistor, I was
> getting "E"
> > even after waiting a while. Someone else pointed this out. The
> 100K
> > seems to make the circuit recognize the module much faster.
> >
> > Are you cool with this change?
> >
> > Thanks,
> >
> > Carey Fuller

> > KX0R
> >
> > >
> > > >
> > > >On top of this I immediately get an E as soon as I key up into
> my
> > > > >NorCal dummy load. I also tried my 300w dummy and it tripped
as
> > well.
> > > >
> > > > Check the connections to the 680 ohm resistor. If this is
> floating, it
> > > > would take very little current to trip the reset.
> > > > 72,
> > > > Steve, KD1JV
> > > > "Melt Solder"
> > > > White Mountains of New Hampshire
> > > > http://kd1jv.qrpradio.com
> > > >
> > >
>

2151. Re: [AT_Sprint] Re: Interesting 3B Band Module Problem

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-17 12:49:55 UTC
From: Michael Harnage
Topic: 2138 Message: 2151

Based on this I don't think its the band modules. I
would continue to double check the main board.

-mike/w1mt

--- Jim Fraser <jimf53@...> wrote:

> As suggested I stuck a 22K resistor (40m) into pins
> 3 and 5 of the
> band module socket, but the 3B still sees 80m. I
> verified the proper
> values were installed for R44 as well as R35-R38 and
> touched up the
> solder joints. But the problem persists.
>
> >>> I immediately get an 'E' as soon as I key up
> into my NorCal dummy
> load. <<<
>
> But as soon as I released the key I got
> the 'E'.
>
>
> I did notice about a 20v spike in voltage at the
> dummy load when I
> released the key, but probably just noise.
>
> ----
>
> Oh well, tomorrow is another day. Think I will try
> removing the above
> mentioned band module resistors to measure the
> values out of circuit,
> replace the SIP pins on the 40/30 modules, and
> replace the band
> module socket if the problem persists.
>

Never miss a thing. Make Yahoo your home page.
http://www.yahoo.com/r/hs

2152. Re: [AT_Sprint] Re: Interesting 3B Band Module Problem

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-17 16:07:26 UTC
From: Steven Weber
Topic: 2138 Message: 2152

>I found that I couldn't get the band recognition to work really well on
>80M until I put 100K in for RF1. With no resistor, I was getting "E"
>even after waiting a while. Someone else pointed this out. The 100K
>seems to make the circuit recognize the module much faster.
>
>Are you cool with this change?

In thoery, it shouldn't be needed, but it will keep the A/D converter input
from exceeding the internal reference supply of 2.5 volts by too much.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2153. Re: Interesting 3B Band Module Problem

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-17 17:52:52 UTC
From: radio_kx0r
Topic: 2138 Message: 2153

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
>
> >I found that I couldn't get the band recognition to work really
well on
> >80M until I put 100K in for RF1. With no resistor, I was
getting "E"
> >even after waiting a while. Someone else pointed this out. The
100K
> >seems to make the circuit recognize the module much faster.
> >
> >Are you cool with this change?
>
> In thoery, it shouldn't be needed, but it will keep the A/D
converter input
> from exceeding the internal reference supply of 2.5 volts by too
much.
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com
>
Steve,

I can't see why it's needed either...but I saw this pattern where if I powered up the rig with the 80M module (with no band sense resistor), it gave me an E. When I pushed the menu button and reset the error, the rig still wasn't on 80M.

I found that everything would work if I let the rig sit unpowered for a while, maybe a minute of so. Then I tried 100K and it behaved like it should.

No big deal, but a mystery to me.

Thanks

Carey Fuller
KX0R

2154. Re: Interesting 3B Band Module Problem

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-17 18:09:32 UTC
From: Jim Fraser
Topic: 2138 Message: 2154

Yes I have been following the procedure steps in the manual and I am now up tp the Band Filter Test and Adjustment. I did do the step with L3 removed but I did make an assumption that perhaps was wrong.

During the check of the keying MOSFET Q6 I saw the voltage rise during the DAHs but it dropped during the gaps between the DAHs. Should the voltage have continued to increase up to near the supply voltage until I stopped keying altogether?

I will go back and triple-check the 3.5 and 5v outputs and check the voltages at U6 as you suggested.

The reference oscillator is set to 10MHz and I got the local oscillator setup with some help from W1MT.

Many Tnx Carey,

Jim K6JF

--- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@...> wrote:
>
> --- In AT_Sprint@yahoogroups.com, "Jim Fraser" <jimf53@> wrote:
>
> Jim,
>
> Did you go through the procedure in the manual to get to this point?
> In particular, do the two linear regulators read 3.5 and 5.o volts,
> and you've verified they're not mixed up (swapped)?
>
> I doubt there's anything wrong with the SIP pins or the band sense
> resistors. You can test those with a meter on the pins (3 and 5) and
> verify the path on each module.
>
> You might try measuring all the voltages on the controller (U6,
> MPS430) - see the chart in the manual.
>
> If the rig thinks a 40M module is an 80M module, it should transmit
> signals for the 80M band; but if that filter is really for 40M, you
> won't get correct operation of the final stage, to say the least.
>
> Did you check the operation of the keying mosfet Q6 per the
> procedure, and then have you installed L3?
>

> Just asking the obvious - you may be past that point.
>
> 72,
> KX0R
> Carey Fuller
>
> > I switched the power supply to 6 AA batteries for tonight's
testing
> > instead of the square 9v battery.
> >
> > >>> My 30M module is recognized by my ATS-3B as a 40m module and
my
> > 40M module is seen as an 80m module. <<<
> >
> > As suggested I stuck a 22K resistor (40m) into pins 3 and 5 of
the
> > band module socket, but the 3B still sees 80m. I verified the
> proper
> > values were installed for R44 as well as R35-R38 and touched up
the
> > solder joints. But the problem persists.
> >
> > >>> I immediately get an 'E' as soon as I key up into my NorCal
> dummy
> > load. <<<
> >
> > I verifed the values of components and touched up the solder
joints
> > in the Current Detector circuit including the 680 ohm resistor
> Steve
> > mentioned. The result was unchanged. I switched to a straight key
> and
> > found that I could key down for quite a while (10 to 15 sec) with
> no
> > tripping. But as soon as I released the key I got the 'E'.
> >
> > I also noticed that the voltage read on the NorCal dummy load was
0
> > vdc, no power output. Since I had recently built the dummy load
and
> > have not used it, I dug up my HiMite-20 QRP rig and the dummy
load
> > showed 350mw output which confirms what I saw on a borrowed QRP
> > wattmeter some time ago.
> >
> > I did notice about a 20v spike in voltage at the dummy load when
I
> > released the key, but probably just noise.
> >
> > ----

> >
> > Oh well, tomorrow is another day. Think I will try removing the
> above
> > mentioned band module resistors to measure the values out of
> circuit,
> > replace the SIP pins on the 40/30 modules, and replace the band
> > module socket if the problem persists.
> >
> > Jim K6JF
> >
> > --- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@>
> > wrote:
> > >
> > > > should. Higher resistance = lower band.
> > >
> > > Steve,
> > >
> > > I think you meant "Higher resistance = lower frequency band".
> The
> > > numbers of meters do get larger, which could be confusing.
> > >
> > > I found that I couldn't get the band recognition to work really
> > well on
> > > 80M until I put 100K in for RF1. With no resistor, I was
> > getting "E"
> > > even after waiting a while. Someone else pointed this out.
The
> > 100K
> > > seems to make the circuit recognize the module much faster.
> > >
> > > Are you cool with this change?
> > >
> > > Thanks,
> > >
> > > Carey Fuller
> > > KX0R
> > >
> > > >
> > > > >
> > > > > >On top of this I immediately get an E as soon as I key up
into
> > my
> > > > > >NorCal dummy load. I also tried my 300w dummy and it tripped
> as
> > > > well.
> > > > >
> > > > > Check the connections to the 680 ohm resistor. If this is
> > floating, it
> > > > > would take very little current to trip the reset.
> > > > > 72,

> > > > Steve, KD1JV
> > > > "Melt Solder"
> > > > White Mountains of New Hampshire
> > > > http://kd1jv.qrpradio.com
> > > >
> > >
> >
>

2155. Audio Filter in ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-17 18:50:25 UTC
From: radio_kx0r
Topic: 2155 Message: 2155

Steve,

I just finished making some measurements on the bandwidth of the entire ATS-3B. Essentially I moved the RF signal in 20 Hz steps and measured the audio output. Of course I found that I had to keep the RF signal below about -87 dbm to avoid AGC action - the AGC is very effective at higher levels. The rig is quite narrow. It's down 30 db about 225 Hz from center (30 db bandwidth 450 Hz). The 10 db bandwidth is about 250 Hz.

I found that the bandwidth is affected by whether I had an audio load on the rig or not. When I measured the audio with just my old HP400D AC voltmeter (Hi-Z), I got a wider, more symmetric plot than when I did a similar measurement with a 27 ohm load from the audio line to ground.

With a Hi-Z audio load I measure the rig's 6 db bandwidth as about 200 Hz. With a 27 ohm audio load I measure the 6 db bandwidth as about 100 Hz, and the peak is shifted down about 60 Hz.

This morning I measured some earphones - I found that several of them have an impedance of 16 ohms per side, which results in 8 ohms with both sides in parallel; these are small, in-ear Walkman-style phones. I have another more traditional set of modern phones that measures 56 ohms per side, for 28 ohms in parallel. I measured with a scope at 600 Hz, with a low-Z generator, and selected series resistors to match the phones. It's interesting that the AC impredances agree closely with DC measurements for 3 pairs of phones.

Clearly the bandpass filter characteristics of the output amp U3B (LM4808) are affected by the load. What's the "best" load? I've noticed that tuning across the passband sounds different when I adjust my inline headphone volume control. I measured the headphone control and found that it adds 500 ohms in series with each side, when set for minimum level, or 250 ohms net. So probably the rig is seeing around 100 ohms when I have the control turned down part way, and 8 ohms at maximum.

I noticed some time ago that the sound was different through the QBSA's amp - I see why now - the input to the QBSA's audio is high-Z. This makes the overall rig a little less selective, with a broader peak. With the low-Z phones, there's about one or two 50 Hz clicks of the Up-Down buttons where the rig sounds peaked.

Maybe the rig setup procedure needs to be done with the intended audio load hooked up, since the peak shifts a bit.

I'd appreciate any information you can provide on the audio design and the intended load impedance. I'm wondering if it's worth making a connector to wire the two headphones in series instead of parallel, etc.

The ATS audio filter is very effective at reducing noise and hiss, and it's superior to what many other rigs have. I hope I'm not opening a can of worms here - I suspect other people have noticed some of these little differences in the sound.

Thanks & 72

Carey Fuller
KX0R

2156. Uploaded some pictures

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-17 20:07:55 UTC
From: john
Topic: 2156 Message: 2156

I uploaded some pictures to a folder with my call (K5MO) of my version of this fun little rig. I found a wallet tin just large enough to hold the rig plus all band modules with the lid shut.

http://ph.groups.yahoo.com/group/AT_Sprint/photos/browse/d6e3?c=

Being a boatanchors fan, I had to add some Hammertone paint. :-)

Nothing special, just another version of this fun rig.

73
John K5MO

2157. Re: [AT_Sprint] Uploaded some pictures

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-17 20:29:39 UTC
From: WA0ITP
Topic: 2156 Message: 2157

Very nice John. Great paint job..

I love this radio stuff!
72 73
Terry, WAØITP
http://www.wa0dx.org/wa0itp
http://www.wa0dx.org
http://www.4sqrp.com/
----- Original Message -----
From: john
To: AT_Sprint@yahoogroups.com
Sent: Saturday, November 17, 2007 2:07 PM
Subject: [AT_Sprint] Uploaded some pictures

I uploaded some pictures to a folder with my call (K5MO) of my version of
this fun little rig. I found a wallet tin just large enough to hold the rig
plus all band modules with the lid shut.

http://ph.groups.yahoo.com/group/AT_Sprint/photos/browse/d6e3?c=

Being a boatanchors fan, I had to add some Hammertone paint. :-)

Nothing special, just another version of this fun rig.

73
John K5MO

No virus found in this incoming message.
Checked by AVG Free Edition.
Version: 7.5.503 / Virus Database: 269.16.0/1135 - Release Date: 11/16/2007 10:58 PM

2158. WTB: ATS-3 A or B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-17 21:47:47 UTC
From: nz8j
Topic: 2158 Message: 2158

Looking for an assembled and working ATS-3A or B. If you have one for sale please send particulars to nz8j@...

Thanks
Tim
NZ8J

2159. Re: Audio Filter in ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-18 05:03:35 UTC
From: radio_kx0r
Topic: 2155 Message: 2159

--- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@...>
wrote:

Steve,

I just did some more tests and realized that something I said earlier
is backwards. I did my bandwidth tests at 7.030 Mhz, and the LO is
on the lower side, near 2.115 Mhz, so RAISING the RF frequency LOWERS
the beat frequency (tone we hear).

This means that when we load the audio with low-Z phones, the audio
peak narrows and shifts UPWARD in frequency. The effect is a little
more than one button click. Sorry for the mistake.

I just did some listening tests - I dropped 10 ohms across the audio
output, while listening with phones set for about 100 ohms, and I
could hear the peak shift upwards. Using the volume control
definitely smooths out the peak as series resistance is added.

I tried running the two sides of the headphones in series instead of
parallel, to get 4X the impedance, and it did smooth the peak some,
but the audio level also went down, since the headphone amp sees a
higher Z load. So when I run the phones in parallel, I usually use
more resistance in series to cut the volume level; the peak is more
broad that way than with the phones in series.

There's also an effect running in series. In parallel, the phones
are in phase, and the sound seems inside my head, right between my
eyes. In series, they're out of phase, and the sound is in both
ears, not centered. I wonder if people can copy CW better one way or
the other...

I verified that the way my rig is set up, the side tone is the same
frequency as my audio center. This is how I like it, so I don't want
to change anything. The effect of the peak shifting higher with less
headphone resistance is small potatoes compared to everything else
being almost perfect.

The rig draws only a few mA more when the audio is so loud I can't
take it...super efficiency. The data sheet for the LM4808 is pretty
amazing.

72,
KX0R
Carey Fuller

> Steve,
>
> I just finished making some measurements on the bandwidth of the
> entire ATS-3B. Essentially I moved the RF signal in 20 Hz steps
and
> measured the audio output. Of course I found that I had to keep
the
> RF signal below about -87 dbm to avoid AGC action - the AGC is very
> effective at higher levels. The rig is quite narrow. It's down 30
> db about 225 Hz from center (30 db bandwidth 450 Hz). The 10 db
> bandwidth is about 250 Hz.
>
> I found that the bandwidth is affected by whether I had an audio
load
> on the rig or not. When I measured the audio with just my old
HP400D
> AC voltmeter (Hi-Z), I got a wider, more symmetric plot than when I
> did a similar measurement with a 27 ohm load from the audio line to
> ground.
>
> With a Hi-Z audio load I measure the rig's 6 db bandwidth as about
> 200 Hz. With a 27 ohm audio load I measure the 6 db bandwidth as
> about 100 Hz, and the peak is shifted down about 60 Hz.
>
> This morning I measured some earphones - I found that several of
them
> have an impedance of 16 ohms per side, which results in 8 ohms with
> both sides in parallel; these are small, in-ear Walkman-style
phones.
> I have another more traditional set of modern phones that measures
56
> ohms per side, for 28 ohms in parallel. I measured with a scope at
> 600 Hz, with a low-Z generator, and selected series resistors to
> match the phones. It's interesting that the AC impredances agree
> closely with DC measurements for 3 pairs of phones.
>
> Clearly the bandpass filter characteristics of the output amp U3B
> (LM4808) are affected by the load. What's the "best" load? I've
> noticed that tuning across the passband sounds different when I
> adjust my inline headphone volume control. I measured the
headphone
> control and found that it adds 500 ohms in series with each side,
> when set for minimum level, or 250 ohms net. So probably the rig
is
> seeing around 100 ohms when I have the control turned down part
way,
> and 8 ohms at maximum.
>
> I noticed some time ago that the sound was different through the
> QBSA's amp - I see why now - the input to the QBSA's audio is high-
> Z. This makes the overall rig a little less selective, with a

> broader peak. With the low-Z phones, there's about one or two 50
Hz
> clicks of the Up-Down buttons where the rig sounds peaked.
>
> Maybe the rig setup procedure needs to be done with the intended
> audio load hooked up, since the peak shifts a bit.
>
> I'd appreciate any information you can provide on the audio design
> and the intended load impedance. I'm wondering if it's worth
making
> a connector to wire the two headphones in series instead of
parallel,
> etc.
>
> The ATS audio filter is very effective at reducing noise and hiss,
> and it's superior to what many other rigs have. I hope I'm not
> opening a can of worms here - I suspect other people have noticed
> some of these little differences in the sound.
>
> Thanks & 72
>
> Carey Fuller
> KX0R
>

2160. Re: Interesting 3B Band Module Problem

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-18 06:14:00 UTC
From: Jim Fraser
Topic: 2138 Message: 2160

SUCCESS!! Among other things I checked for solder bridges (again) under a very strong light and found a very thin bridge across pins 4 and 5 of U7, the 5v and 3.5v lines. There was also a bridge across pins 15 and 16 of U7. A couple days ago I had retouched this chip when I had problems with the reference oscillator and must have caused the solder problem at that time.

After the cleanup, all my band modules now sense correctly, the keyer works with no 'E' and I get power output!

80m - 3w 20m - 3w
40m - 2w 17m - 2.5w
30m - 3w 15m - 3w

These values are without any toroid adjustments, I'll do that in the next couple days. Power input was 9.18v so the output looks reasonable.

Thanks to W1MT, KX0R, Steve and everyone else for your assistance. Time to go toss down a couple cold ones and celebrate!

72 de Jim K6JF

--- In AT_Sprint@yahoogroups.com, "Jim Fraser" <jimf53@...> wrote:
>
> Yes I have been following the procedure steps in the manual and I
am
> now up tp the Band Filter Test and Adjustment. I did do the step
with
> L3 removed but I did make an assumption that perhaps was wrong.
>
> During the check of the keying MOSFET Q6 I saw the voltage rise
> during the DAHs but it dropped during the gaps between the DAHs.
> Should the voltage have continued to increase up to near the supply
> voltage until I stopped keying altogether?
>
> I will go back and triple-check the 3.5 and 5v outputs and check
the
> voltages at U6 as you suggested.
>
> The reference oscillator is set to 10MHz and I got the local
> oscillator setup with some help from W1MT.
>
> Many Tnx Carey,
>
> Jim K6JF

>
>
> --- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@>
> wrote:
> >
> > --- In AT_Sprint@yahoogroups.com, "Jim Fraser" <jimf53@> wrote:
> >
> > Jim,
> >
> > Did you go through the procedure in the manual to get to this
> point?
> > In particular, do the two linear regulators read 3.5 and 5.o
volts,
> > and you've verified they're not mixed up (swapped)?
> >
> > I doubt there's anything wrong with the SIP pins or the band
sense
> > resistors. You can test those with a meter on the pins (3 and 5)
> and
> > verify the path on each module.
> >
> > You might try measuring all the voltages on the controller (U6,
> > MPS430) - see the chart in the manual.
> >
> > If the rig thinks a 40M module is an 80M module, it should
transmit
> > signals for the 80M band; but if that filter is really for 40M,
you
> > won't get correct operation of the final stage, to say the
least.
> >
> > Did you check the operation of the keying mosfet Q6 per the
> > procedure, and then have you installed L3?
> >
> > Just asking the obvious - you may be past that point.
> >
> > 72,
> > KX0R
> > Carey Fuller
> >
> > > I switched the power supply to 6 AA batteries for tonight's
> testing
> > > instead of the square 9v battery.
> > >
> > > >>> My 30M module is recognized by my ATS-3B as a 40m module
and
> my
> > > 40M module is seen as an 80m module. <<<
> > >
> > > As suggested I stuck a 22K resistor (40m) into pins 3 and 5 of

> the
> > > band module socket, but the 3B still sees 80m. I verified the
> > proper
> > > values were installed for R44 as well as R35-R38 and touched up
> the
> > > solder joints. But the problem persists.
> > >
> > > >>> I immediately get an 'E' as soon as I key up into my NorCal
> > dummy
> > > load. <<<
> > >
> > > I verifed the values of components and touched up the solder
> joints
> > > in the Current Detector circuit including the 680 ohm resistor
> > Steve
> > > mentioned. The result was unchanged. I switched to a straight
key
> > and
> > > found that I could key down for quite a while (10 to 15 sec)
with
> > no
> > > tripping. But as soon as I released the key I got the 'E'.
> > >
> > > I also noticed that the voltage read on the NorCal dummy load
was
> 0
> > > vdc, no power output. Since I had recently built the dummy load
> and
> > > have not used it, I dug up my HiMite-20 QRP rig and the dummy
> load
> > > showed 350mw output which confirms what I saw on a borrowed QRP
> > > wattmeter some time ago.
> > >
> > > I did notice about a 20v spike in voltage at the dummy load
when
> I
> > > released the key, but probably just noise.
> > >
> > > ----
> > >
> > > Oh well, tomorrow is another day. Think I will try removing the
> > above
> > > mentioned band module resistors to measure the values out of
> > circuit,
> > > replace the SIP pins on the 40/30 modules, and replace the band
> > > module socket if the problem persists.
> > >
> > > Jim K6JF
> > >
> > > --- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@>

> > > wrote:
> > > >
> > > > > should. Higher resistance = lower band.
> > > > >
> > > > > Steve,
> > > > >
> > > > > I think you meant "Higher resistance = lower frequency
band".
> > The
> > > > > numbers of meters do get larger, which could be confusing.
> > > > >
> > > > > I found that I couldn't get the band recognition to work
really
> > > well on
> > > > > 80M until I put 100K in for RF1. With no resistor, I was
> > > getting "E"
> > > > > even after waiting a while. Someone else pointed this out.
> The
> > > 100K
> > > > > seems to make the circuit recognize the module much faster.
> > > > >
> > > > > Are you cool with this change?
> > > > >
> > > > > Thanks,
> > > > >
> > > > > Carey Fuller
> > > > > KX0R
> > > > >
> > > > > >
> > > > > > >
> > > > > > > >On top of this I immediately get an E as soon as I key up
> into
> > > my
> > > > > > > >NorCal dummy load. I also tried my 300w dummy and it
tripped
> > as
> > > > > well.
> > > > > > >
> > > > > > > Check the connections to the 680 ohm resistor. If this is
> > > floating, it
> > > > > > > would take very little current to trip the reset.
> > > > > > > 72,
> > > > > > > Steve, KD1JV
> > > > > > > "Melt Solder"
> > > > > > > White Mountains of New Hampshire
> > > > > > > http://kd1jv.qrpradio.com
> > > > > > >
> > > > > >
> > > > >
> > >

>

2161. Re: Interesting 3B Band Module Problem

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-18 06:41:45 UTC
From: radio_kx0r
Topic: 2138 Message: 2161

--- In AT_Sprint@yahoogroups.com, "Jim Fraser" <jimf53@...> wrote:
>
> SUCCESS!! Among other things I checked for solder bridges (again)
> under a very strong light and found a very thin bridge across pins
4
> and 5 of U7, the 5v and 3.5v lines. There was also a bridge across
> pins 15 and 16 of U7. A couple days ago I had retouched this chip
> when I had problems with the reference oscillator and must have
> caused the solder problem at that time.
>
> After the cleanup, all my band modules now sense correctly, the
keyer
> works with no 'E' and I get power output!
>
> 80m - 3w 20m - 3w
> 40m - 2w 17m - 2.5w
> 30m - 3w 15m - 3w
>
> These values are without any toroid adjustments, I'll do that in
the
> next couple days. Power input was 9.18v so the output looks
> reasonable.
>
> Thanks to W1MT, KX0R, Steve and everyone else for your assistance.
> Time to go toss down a couple cold ones and celebrate!
>
> 72 de Jim K6JF
>
Jim,

Nice work finding those shorts! I think you showed that 3.5V chips can run on 5V and not burn out. Hope everything turns out OK.

Those power levels are like what I had at that point. 3W at 9.0V is plenty - that should yield close to 5W at 12.0V. Be sure to watch the supply current when you adjust the modules. Just because you can get even more power doesn't mean you should. 40M was my low one also - I ended up adding some capacitance to C2F.

I'm going to post all my results to the FILES section here in case someone else wants to see what I ended up with.

72,

Carey Fuller
KX0R

2162. Re:[AT_Sprint] Re: Interesting 3B Band Module Problem

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-18 06:44:57 UTC
From: J. Haynes
Topic: 2162 Message: 2162

Great. Now you can help me locate MY shorts!? [ba-dum chsssh...]

2163. Power Output and Filter Details

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-18 07:10:44 UTC
From: radio_kx0r
Topic: 2163 Message: 2163

I just uploaded a pair of pdf documents to the FILES section here.

The file "ATS-3B Power Measurements" lists what I'm getting from my completed ATS-3B after adjusting the filter modules. I'm delighted that this tiny rig delivers this performance on every band.

The larger file "ATS-3B Filter Module Details" is a complete list with details for each module. Modifications are printed in red, so you can see what I messed with. Each band is detailed on a separate page for clarity.

Be warned that you can screw up your transmitter if you try to modify the modules for too much power. You can end up with excessive heating, too much current drain, loss of efficiency, and spurious emissions if you're not real careful. Read everything I wrote in the beginning before even thinking about messing with these things! Read what Steve says in the manual also!!

You have been warned...this is about my rig. Your results may vary. Your rig is your responsibility.

I confess this was fun.

72,

Carey Fuller
KX0R

2164. Re: EFHW L tuner

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-18 16:39:52 UTC
From: ve3wmb
Topic: 2138 Message: 2164

BTW :

Those Altoids gum tins are just dandy for carrying some spare stuff
for your portable radio setup. I keep a spare set of earbuds, a few
spare fuses, some small wire-nuts, a few fishing snap swivels, a
couple of solderless banana plugs and a bit of fishing line for those
times where something breaks or I manage to forget something at home.
It is amazing how much small stuff you can pack into one of these
little tins.

Michael VE3WMB

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
>
> I've had one of those Altoids chewing gum tins kicking around here for
> awhile and been wondering what to build into it all that time.

2165. Re: [AT_Sprint] Re: EFHW L tuner

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-18 16:56:47 UTC
From: n0tu/Steve
Topic: 2138 Message: 2165
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2166. Re: Interesting 3B Band Module Problem

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-18 19:22:28 UTC
From: Jim Fraser
Topic: 2138 Message: 2166

Carey,

I saw your posting about the power levels and will pick up a capacitor to increase the value at C2F on the 40m module and see what happens. If I can get 3w at 9v on all bands for field work, I will be happy.

I think I will also pick up a 5.6K resistor for the current trip mod just in case I need the extra margin, though I won't add it unless I need it. I will be using the 3B with a BLT Tuner preset offline using my Tenna Dipper.

Jim K6JF

--- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@...> wrote:
>
> --- In AT_Sprint@yahoogroups.com, "Jim Fraser" <jimf53@> wrote:
> >
> > SUCCESS!! Among other things I checked for solder bridges (again)
> > under a very strong light and found a very thin bridge across pins
> 4
> > and 5 of U7, the 5v and 3.5v lines. There was also a bridge across
> > pins 15 and 16 of U7. A couple days ago I had retouched this chip
> > when I had problems with the reference oscillator and must have
> > caused the solder problem at that time.
> >
> > After the cleanup, all my band modules now sense correctly, the
> keyer
> > works with no 'E' and I get power output!
> >
> > 80m - 3w 20m - 3w
> > 40m - 2w 17m - 2.5w
> > 30m - 3w 15m - 3w
> >
> > These values are without any toroid adjustments, I'll do that in
> the
> > next couple days. Power input was 9.18v so the output looks
> > reasonable.
> >
> > Thanks to W1MT, KX0R, Steve and everyone else for your assistance.
> > Time to go toss down a couple cold ones and celebrate!

> >
> > 72 de Jim K6JF
> >
> Jim,
>
> Nice work finding those shorts! I think you showed that 3.5V chips
> can run on 5V and not burn out. Hope everything turns out OK.
>
> Those power levels are like what I had at that point. 3W at 9.0V
is
> plenty - that should yield close to 5W at 12.0V. Be sure to watch
> the supply current when you adjust the modules. Just because you
can
> get even more power doesn't mean you should. 40M was my low one
> also - I ended up adding some capacitance to C2F.
>
> I'm going to post all my results to the FILES section here in case
> someone else wants to see what I ended up with.
>
> 72,
>
> Carey Fuller
> KX0R
>

2167. Series Power Supply Resistor for Tuning

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-18 19:43:23 UTC
From: radio_kx0r
Topic: 2167 Message: 2167

Following a suggestion from someone else here, I tried putting a resistor in series with my 3-cell lithium ion pack, to reduce the current when tuning the rig. This works so well I can't see why anything else would be better.

I used three 20 ohm 2W metal oxide resistors in parallel - that gives a resistor of about 6.7 ohms. I put them in the box with the cells, and wired a slide switch to short out the resistor for normal full-power opration.

The rig's output is cut in half, from about 5W to 2.5W, with the cells fully charged. The current draw is about 0.5A with the series resistor. There's no effect on the rig's operation, except that it's a lot easier to avoid current trip.

The keying is surprisingly good with the resistor - you can go ahead and operate with it - this is contrary to everything we've all learned with other rigs. I did listening tests, and the keying's OK - clean, stable, no chirp, no clicks! I haven't looked at it on the scope yet, but I'm not worried about using it on the air.

Might be a way to extend battery life a bit in the sprints...

It sure makes sense to tune your tuner this way! Use 10 ohms if you want to knock it down lower. I chose 6.7 ohms because I'm already using a bridge on my tuner.

72,

Carey Fuller
KX0R

2168. Re: [AT_Sprint] Re: EFHW L tuner

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-18 21:31:32 UTC
From: Steven Weber
Topic: 2138 Message: 2168

> I don't see how Steve's gonna get one of those poly caps to
>fit in terms of its height . The ones I have are too tall? When you close

First, I use one the the type Doug sells at qrpkits.com. Second, I had to pound the bottom of the tin flat with a hammer to get enough height so the lid would close with a knob on the shaft (a modified large button)

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2169. ATS3B alignment with spectrogram

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-18 22:32:04 UTC
From: Fred Maas
Topic: 2169 Message: 2169
Attachments: 3 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2170. Re: ATS3B alignment with spectrogram

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-19 00:07:05 UTC
From: radio_kx0r
Topic: 2169 Message: 2170

--- In AT_Sprint@yahoogroups.com, "Fred Maas" <just.one.hill@...>
wrote:

Hey Fred,

This is very clear and sounds right!

Unfortunately your image attachments didn't come through here, so
please log in, go to the FILES section, and upload those images so we
can see them.

Thanks

Carey KX0R
>
> I don't have a scope or signal generator, so i have done things this
> way, maybe helpful to someone else, too.
>
> After putting the radio in CF mode, a brought a clip lead from the
> antenna jack of my Elecraft K2 near TP1. I tuned in WWV at 10 mhz
> with the K2. I had to move the pick up lead many feet away from the
> ATS3B for that signal to match WWV signal strength, since the only
> antenna for reception of either was a two foot clip lead. Listening
> to both signals beating against one another, I was able to bring the
> ATS3B oscillator right on it.
>
> Now, after touching the menu button to move to the next mode, I
> connected the ATS3B audio output to the computer sound card, and ran
> Spectrogram. I was now able to put the BFO right smack on 600
cycles
> with the green cap. Adjustment with the tune buttons, would cut off
> one side or the other, until it was centered on 600 cycles also.
>
> Afterwards, I put a noise bridge on the passband to see what it
> actually looks like.
>
> the first attachment shows the tone being put on 600 cycles. the
> second attachment shows the passband revealed with a noise bridge.
>
> I am struggling with some kind of periodic oscillation, a buzz that
> begins with a few tick, tick, ticks, then accelerates to a buzz,
then
> stops. After a while begins again.
>
> 72, FD (Fred) KT5X
> (W5YA/qrp)

>

2171. Re: ATS3B alignment with spectrogram

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-19 00:09:46 UTC
From: radio_kx0r
Topic: 2169 Message: 2171

--- In AT_Sprint@yahoogroups.com, "Fred Maas" <just.one.hill@...>
wrote:
Fred,

Sorry - please upload pictures to the PHOTOS section. You might want
to put your writeup in FILES as a Word file, PDF, or whatever.

Thanks

KX0R

>
> I don't have a scope or signal generator, so i have done things this
> way, maybe helpful to someone else, too.
>
> After putting the radio in CF mode, a brought a clip lead from the
> antenna jack of my Elecraft K2 near TP1. I tuned in WWV at 10 mhz
> with the K2. I had to move the pick up lead many feet away from the
> ATS3B for that signal to match WWV signal strength, since the only
> antenna for reception of either was a two foot clip lead. Listening
> to both signals beating against one another, I was able to bring the
> ATS3B oscillator right on it.
>
> Now, after touching the menu button to move to the next mode, I
> connected the ATS3B audio output to the computer sound card, and ran
> Spectrogram. I was now able to put the BFO right smack on 600
cycles
> with the green cap. Adjustment with the tune buttons, would cut off
> one side or the other, until it was centered on 600 cycles also.
>
> Afterwards, I put a noise bridge on the passband to see what it
> actually looks like.
>
> the first attachment shows the tone being put on 600 cycles. the
> second attachment shows the passband revealed with a noise bridge.
>
> I am struggling with some kind of periodic oscillation, a buzz that
> begins with a few tick, tick, ticks, then accelerates to a buzz,
then
> stops. After a while begins again.
>
> 72, FD (Fred) KT5X
> (W5YA/qrp)
>

2172. Re: [AT_Sprint] Re: ATS3B alignment with spectrogram

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-19 01:02:08 UTC
From: Fred Maas
Topic: 2169 Message: 2172

Sorry, but I am not a registered Yahoo, I have been accused of being one from time to time ;-) but never convicted.

Also sent them to you directly, Carey, you are welcome to post them.

Fd

2173. Re: Power Output and Filter Details

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-19 03:28:18 UTC
From: radio_kx0r
Topic: 2163 Message: 2173

--- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@...>
wrote:
I just uploaded a photo showing my modified filter modules - this is
in the "PHOTOS" section in folder KX0R. The image is adequate to
show how tight the turns are for the adjustments I used. The #26
wire is used is green.

Please look in "FILES" for details on the mods.

I also added a photo showing the rig, and another showing the
soldering job done with the Cash Olson solder paste/hot air/candle
warmer system.

72,

Carey Fuller
KX0R
>
> I just uploaded a pair of pdf documents to the FILES section here.
>
> The file "ATS-3B Power Measurements" lists what I'm getting from my
> completed ATS-3B after adjusting the filter modules. I'm delighted
> that this tiny rig delivers this performance on every band.
>
> The larger file "ATS-3B Filter Module Details" is a complete list
with
> details for each module. Modifications are printed in red, so you
can
> see what I messed with. Each band is detailed on a separate page
for
> clarity.
>
> Be warned that you can screw up your transmitter if you try to
modify
> the modules for too much power. You can end up with excessive
heating,
> too much current drain, loss of efficiency, and spurious emissions
if
> you're not real careful. Read everything I wrote in the beginning
> before even thinking about messing with these things! Read what
Steve
> says in the manual also!!
>
> You have been warned...this is about my rig. Your results may
vary.
> Your rig is your responsibility.

>
> I confess this was fun.
>
> 72,
>
> Carey Fuller
> KX0R
>

2174. Re: [AT_Sprint] EFHW L tuner

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-19 17:57:27 UTC
From: n0tu/Steve
Topic: 2138 Message: 2174
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2175. New build for ATS-3a?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-19 18:30:14 UTC
From: jess gypin
Topic: 2175 Message: 2175
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2176. Re: [AT_Sprint] New build for ATS-3a?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-19 18:35:09 UTC
From: n0tu/Steve
Topic: 2175 Message: 2176

Jess ...on the performance aspect expect better than the KX1! IMHO
BTW the BEE version does 80-15m Steve/n0tu

On Nov 19, 2007 11:30 AM, jess gypin <ontarget1911@...> wrote:
>
>
> I am pretty sure that this kit is a 3A, but not completely. The board just
> says AT SPRINT III with KD1JV below that. The mabual CD c=says it is rev C.
> What can I look for to detemine whic rev it is and if there are any mods
> that will need to be made to make the radio run it's best?
>
> And man! are there a lot of small parts! What is the average build time on
> one of these. I have a lot of good soldering experience having built over
> 100 QRP kits and soldering for a living at the beginning of my career, but
> no surface mount experience. I noticed in the files and pics that there is a
> fixture that some have built to keep the parts in place while soldering. Is
> there one version of this that some have found to be more efficient than
> others?
>
> And finally, what kind of performance can I expect from this rig? I have
> built and owned several K1s and KX1s for friends and others and wonder how
> this compares? The modules that are marked for this are 20,30,40 and 80.
> Isn't the newer version include higher bands?
>
> Thanks for taking the time to look at my silly questions.
>
> Jess AE0CW<><
>
>

2177. Updates on my kit.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-19 18:43:35 UTC
From: jess gypin
Topic: 2177 Message: 2177
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2178. Re: [AT_Sprint] New build for ATS-3a?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-19 18:45:40 UTC
From: jess gypin
Topic: 2175 Message: 2178
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2179. Re: [AT_Sprint] New build for ATS-3a?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-19 18:47:28 UTC
From: jess gypin
Topic: 2175 Message: 2179
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2180. Re: [AT_Sprint] New build for ATS-3a?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-19 20:29:14 UTC
From: Michael Harnage
Topic: 2175 Message: 2180

The ATS 3 had a slug transformer on the main board. It
also has wide mode. The ATS 3A does not. :)

-mike/w1mt

--- jess gypin <ontarget1911@...> wrote:

> I am pretty sure that this kit is a 3A, but not
> completely.

_____
Be a better sports nut! Let your teams follow you
with Yahoo Mobile. Try it now.
http://mobile.yahoo.com/sports;_ylt=At9_qDKvtAbMuh1G1SQtBI7ntAcJ

2181. Re: [AT_Sprint] New build for ATS-3a?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-19 21:01:06 UTC
From: Steven Weber
Topic: 2175 Message: 2181

> I am pretty sure that this kit is a 3A, but not completely. The
>board just says AT SPRINT III with KD1JV below that.

Then you have the original ATS-3, since its labled AT Sprint III

The ATS-3A board is labled ATS-3A
The ATS-3B board is labled ATS-3B

There is only one mod for the original 3. R22 on the back side of the board should be 270 ohms. Since you have a rev C manual, then you probably received that value.

It is not practical to add 17 meters to the rig. Besides having to get a new DDS reference clock, new DDS output filter, the AC version of the '02 logic chip, new firmware and another filter board, the 3 and 3A can only reconnize four different band modules.

Also, I do not have any spare filter boards for the 3, 3A or 3B. (so don't loose any of the ones you got, as they can't be replaced!)

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2182. Re: [AT_Sprint] EFHW L tuner

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-19 21:35:42 UTC
From: Steven Weber
Topic: 2138 Message: 2182

>after so many cycles? Or do think the dip switch would even survive the
>RF passing through it?

Good question. Looks like most of them are rated for 100 ma and will need
to be used on the high current side of the inductor.

Although your 20/40 version sounds like an easier
>solution with tthe slide switch. Maybe then just use another halfwave wire
>for cut for either 30/17m if you want those other bands? I bet the tuner
>has the range to match 'em? Cool!!

Each band requires its own unique L/C combination. The ALT/SLT uses a bank
of 5 inductors which can be switched in or out to produce 64 different
combinations in order to arrive at the proper total inductance.

I used 0.5, 1, 2, 4 and 8 uhy values so any value from 0.5 to 15.5 uhy in
0.5 uhy steps can be obtained. Actually, for 40 to 10 meters 0.25, 0.5, 1,
2 and 4 uhy values could be better choice.

There is not enough room in the gum tin for that many coils. In the two
band version I'm building, the coil for each band will be tweaked by
adding/removing turns to get the right value with the antenna wire
attached. Once that is determined, the coils will be left alone.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2183. Re: [AT_Sprint] New build for ATS-3a?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-19 22:07:51 UTC
From: jess gypin
Topic: 2175 Message: 2183
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2184. Re: [AT_Sprint] New build for ATS-3a?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-19 22:12:18 UTC
From: John A. Evans - N0HJ
Topic: 2175 Message: 2184

Jess,

Research mods to the ATS-3 - there were a couple that required some interesting component placement/additions. Very good rig !! Also, since it has the wideband mode and newer versions don't, it has features that others may desire. Of course, it doesn't give you 17m. I've built three of Steve's AT rigs (ATS, ATS-3, and ATS-3b) and they have all been fun.

72 - john - n0hj - colorado springs, co

jess gypin wrote:
> I think that we have figured out that this is the ATS-3, first version.
>
> Jess AE0CW <><
>
>

2185. Rotary Encoder for ATS-3

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-19 22:17:08 UTC
From: Steve White
Topic: 2185 Message: 2185

Has anyone tried building the Rotary Encoder from the the files that Anders SM5EFX has posted in the Files section? I am interested in this and would like to find out how well it worked and had some questions regarding the interface of the circuit to the ATS3.

Steve NU0P

2186. Re: [AT_Sprint] New build for ATS-3a?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-19 22:26:13 UTC
From: jess gypin
Topic: 2175 Message: 2186
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2187. qso's per 9volt battery

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-19 23:55:47 UTC
From: ak3f
Topic: 2187 Message: 2187

does anybody have any info on the number of qsos possible with the 3B
on a standard 9 volt alkaline battery? has anybody tried?

mike ak3f

2188. "3b" for sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-20 00:41:39 UTC
From: noniambic
Topic: 2188 Message: 2188

Untouched, unopened ATS-3b kit, from the first run of 100. Steve did an amazing job of designing this rig, but my interest in radio has dwindled with the sunpots, so does anyone want this for $190, shipped (CONUS only)? Money order or cashier's check preferred, personal check OK but must clear before shipping. Please reply here or to noniambic@.... Thanks, Jack W4DT

2190. "3b" for sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-20 01:12:26 UTC
From: noniambic
Topic: 2188 Message: 2190

Sure, Dale, if no one else claims it, that would be fine. I'm not in a hurry. Thanks for responding.
73 to you, Jack W4DT

2191. Re: [AT_Sprint] "3b" for sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-20 01:32:56 UTC
From: bgriffin
Topic: 2188 Message: 2191

Jack,

I could send you a USPS money order on Wednesday if that will work for you.
I missed out on the initial sale and the second, but would love to have
one of these
rigs.

Bill, ni5x.

> Untouched, unopened ATS-3b kit, from the first run of 100. Steve did
> an amazing job of designing this rig, but my interest in radio has
> dwindled with the sunpots, so does anyone want this for $190, shipped
> (CONUS only)? Money order or cashier's check preferred, personal check
> OK but must clear before shipping. Please reply here or to
> noniambic@... <mailto:noniambic%40yahoo.com>. Thanks, Jack W4DT
>
>
> ---
>
> No virus found in this incoming message.
> Checked by AVG Free Edition.
> Version: 7.5.503 / Virus Database: 269.16.1/1140 - Release Date: 11/19/2007 7:05 PM
>

2192. Re: [AT_Sprint] "3b" for sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-20 01:49:31 UTC
From: ron
Topic: 2188 Message: 2192

On Tue, 2007-11-20 at 00:41 +0000, noniambic wrote:
> Untouched, unopened ATS-3b kit,
> so does anyone want this for $190, shipped
> (CONUS only)?

man,
I would like to take it but ....
it's getting close to XMAS and I'm just about spent ....

:(

Ron, wb1hga

2193. "3b" For Sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-20 02:17:30 UTC
From: noniambic
Topic: 2193 Message: 2193

That works for me, Bill, it's yours. Send payment to my address on QRZ.com. I'll ship the kit to you right away. Enjoy.
Sorry, Dale and Ron, hopefully someone else may have one for you when you're ready.
To all - I've enjoyed reading the posts here these past weeks. There are some smart and creative people in this group.
73, Jack W4DT

2194. RE: [AT_Sprint] "3b" For Sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-20 02:38:56 UTC
From: Dale Putnam
Topic: 2193 Message: 2194

Not a problem, the 3B is way to good a radio to let it set unloved, the way I look at it. And seein as I don't have one, and would like to try it, I'm sure one will pop up for Ron and I.
Thanks anyway,--... ...--Dale - WC7S in Wy

To: AT_Sprint@yahoogroups.comFrom: noniambic@...: Tue, 20 Nov 2007 02:17:30 +0000Subject: [AT_Sprint] "3b" For Sale

That works for me, Bill, it's yours. Send payment to my address on QRZ.com. I'll ship the kit to you right away. Enjoy.Sorry, Dale and Ron, hopefully someone else may have one for you when you're ready.To all - I've enjoyed reading the posts here these past weeks. There are some smart and creative people in this group.73, Jack W4DT

_____
You keep typing, we keep giving. Download Messenger and join the i’m Initiative now.
http://im.live.com/messenger/im/home/?source=TAGLM

2195. November NAQCC Sprint

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-20 03:01:44 UTC
From: Larry Makoski
Topic: 2195 Message: 2195

This Wednesday evening, the North American QRP CW Club will be holding its monthly sprint.

Here are the particulars:

Date and time:
Thursday November 22nd, 0030-0230 UTC
(Remember that's Wednesday evening here in the USA) That's 8:30 - 10:30 EDT, 7:30 - 9:30 CDT, 6:30 - 8:30 MDT and 5:30 - 7:30 PDT.

Bands - Frequencies:
80M - 3555-3565 kHz (Be courteous to FISTS operating on 3558 kHz)
40M - 7039-7050 kHz (Avoid W1AW on 7047.5 kHz).
20M - 14059-14065 kHz. General:
A particular station may be worked once on each band. Operate CW only. All licensed amateurs are invited to participate, but only those operating QRP (5 watts or less) are eligible for awards.

Call: CQ NA

Exchange:
RST - SPC (State Province or Country) - NAQCC Nr.
(non-Members substitute power level for NAQCC Nr., e.g. 5W, 1W, etc. Be sure to add the W.)

QSO Points:
QSO with a Member, 2 points.
QSO with a Non-member, 1 point.

Multipliers:
Each USA state
Each VE province
Each country except W/VE
All multipliers count only once in the contest.

Bonus:
If you use only a straight key for the entire sprint, multiply your score by 2.
If you use only a bug for the entire sprint, multiply your score by 1.5.
If you key with anything other than a straight key or bug, there is no bonus multiplier.

Categories:
SWA - simple wire antennas - for those using a simple wire antenna per NAQCC definition.
GAIN - gain antennas - for those using other than a simple wire antenna.

Special Award:
Our special award this month goes to the one who has the highest score and uses a homebrew straight key. If a 1st or 2nd place certificate winner also qualifies for winning the SA, the SA goes to the next highest scorer. That is because we want as many members as possible to receive one of our certificates. You must indicate in your report if you are applying for the SA, and include a picture of your straight key.

Autologger SA info: To be eligible for the SA, you must select Yes in the 'Eligible for the Special Award.......' box. Nothing need be put in the 'Special Award info.......' box. You will have to submit your key picture in a separate email.

Prize:
Continuing this month we are giving away a set of CD's to one participant according to the following rules:

1. The participant meeting the requirements below and posting the highest score will be the winner of a set of CD's in the following months: July, August, September, October, November, January, February, March, April, and May.
A. Requirements: The participant must be a NAQCC member and can not have won a CD set previously.
B. If the highest scorer does not meet the requirements, then the CD set winner will be the next highest scorer who does meet the requirements.

2. Twice a year - in the December and June sprints, the winner will be a participant drawn at random who meets the requirements in 1A and who makes at least 5 QSO's in the sprint.

3. Club Officers (WY3H (ex-KB3LFC), K3WWP, W2LJ, K5DUZ, KD2MX) are not eligible.

REMEMBER: You HAVE to be a NAQCC member to be eligible to win the CDs; and there's still plenty of time to join before Wednesday night's sprint. To join the NAQCC, please visit:
http://www.arm-tek.net/~yoel//joinup.html

Entry Deadline:
All entries must be RECEIVED before 2400Z on November 28th, 2007. So submit as soon as possible, especially regular mail entries.

NEW! NEW! NEW!
Be sure to use the new NAQCC Sprint Autologger feature! Please visit http://home.alltel.net/johnshan/sprintlog.html after the Sprint to send in your entry!

For further information, please visit:
http://www.arm-tek.net/~yoel//sprint200711.html

2196. First Field QSO's with ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-20 06:40:12 UTC
From: radio_kx0r
Topic: 2196 Message: 2196

It was a warm afternoon here, so I hiked up into the woods with my ATS-3B for its first use outdoors. The sun sets early, so I didn't mess with a dipole - just a half-wave sloper for 20 meters up 25 feet or so in a pine tree. It connected to a BLT sitting on a log, with a 45-foot counterpoise lying in the grass. No feedline - no ground.

The BLT tuned up fine in Hi-Z mode, and I got a good null. The band sounded too quiet, and at first I thought the band might be going dead - but before long I heard WA5PRI calling CQ, and we began a 45-minute rag chew from CO to Thibodaux, LA. It was pretty solid and pleasant right until the band fell out - sunset was somewhere near mid-path, and there are no sunspots.

Right after we signed a local ham on an MFJ indoor loop called me from about 6 miles away. He was 599+ - we were line-of-sight from my elevated site on a mesa.

Anyhow, the rig performed perfectly, it was easy, solid as a rock, an amazing experience to use. All I could say was "WOW". It's a lot easier to use than it is to build!

Later I modelled the sloper on EZNEC, and found that it was down almost 12 db compared to a dipole at 35 feet, in the direction of Louisiana. It was still a good QSO. It helped being on the edge of a mesa, and the LA station had a beam.

The end-fed simple antennas offer simplicity, fast setup, and a minimal amount of stuff to carry. They don't model very well compared to horizontal dipoles, loops, vees, and EDZ's. Classic tradeoffs here.

My BLT is overkill. I may build one of those L-network tuners just to play with it. To go really tiny, a mica variable might be worth considering - another trade-off. When the polyvaricons dry up, we'll all be looking for alternatives.

2197. Re: [AT_Sprint] First Field QSO's with ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-20 12:14:43 UTC
From: w9ya@qrparci.net
Topic: 2196 Message: 2197

Hey Cathy (I *think it is Cathy, the message seems unsigned) and the gang;

Here's what I use to avoid placing the current node of the antenna near
the ground, where a portion of your signal goes to "heating up the dirt":

1/2 wave of wire connected to a 1/4 wave of balanced feeder. It looks and
acts just like a j-pole. In my case the feeder line is the real thing,
i.e. some surplus N.O.S. balanced feeder, but you can use whatever might
be handy, including "window line" if it doesn't get wet. If you get this
cut just right, you don't need much, if any, tuner btw.

You can use the 1/2 wave portion as a sloper, horiz. dipole, inverted v,
or even a vert.

Slopers are great btw, and will work even better without the so-called
counterpoise.

Vy 72;

Bob
w9ya

> It was a warm afternoon here, so I hiked up into the woods with my
> ATS-3B for its first use outdoors. The sun sets early, so I didn't
> mess with a dipole - just a half-wave sloper for 20 meters up 25 feet
> or so in a pine tree. It connected to a BLT sitting on a log, with a
> 45-foot counterpoise lying in the grass. No feedline - no ground.
>
> The BLT tuned up fine in Hi-Z mode, and I got a good null. The band
> sounded too quiet, and at first I thought the band might be going dead
> - but before long I heard WA5PRI calling CQ, and we began a 45- minute
> rag chew from CO to Thibodaux, LA. It was pretty solid and pleasant
> right until the band fell out - sunset was somewhere near mid-path, and
> there are no sunspots.
>
> Right after we signed a local ham on an MFJ indoor loop called me from
> about 6 miles away. He was 599+ - we were line-of-sight from my
> elevated site on a mesa.
>
> Anyhow, the rig performed perfectly, it was easy, solid as a rock, an
> amazing experience to use. All I could say was "WOW". It's a lot
> easier to use than it is to build!
>
> Later I modelled the sloper on EZNEC, and found that it was down
> almost 12 db compared to a dipole at 35 feet, in the direction of
> Louisiana. It was still a good QSO. It helped being on the edge of a
> mesa, and the LA station had a beam.

>
> The end-fed simple antennas offer simplicity, fast setup, and a
> minimal amount of stuff to carry. They don't model very well
> compared to horizontal dipoles, loops, vees, and EDZ's. Classic
> tradeoffs here.
>
> My BLT is overkill. I may build one of those L-network tuners just to
> play with it. To go really tiny, a mica variable might be worth
> considering - another trade-off. When the polyvaricons dry up, we'll
> all be looking for alternatives.

2198. Re: [AT_Sprint] qso's per 9volt battery

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-20 15:25:55 UTC
From: Bill Noyce
Topic: 2187 Message: 2198

Before I got my Li-poly batteries, I usually ran my original ATS-3 in the Spartan Sprint with a single 9v alkaline battery. I think a -3B draws pretty close to the same current. During the two hours I usually alternated hunt-and-pounce with CQ'ing, and could make a dozen or two brief contacts. There was still enough juice at the end of the sprint for over 1 watt output. But I think a pack of AA's has a better QSO's-per-pound ratio, if you're not limited to two hours.
-- Bill, AB1AV

On 11/19/07, ak3f <mbhayden@...> wrote:

>
> does anybody have any info on the number of qsos possible with the 3B
> on a standard 9 volt alkaline battery? has anybody tried?
>
> mike ak3f

2199. Re: [AT_Sprint] qso's per 9volt battery

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-20 15:37:30 UTC
From: w9ya@qrparci.net
Topic: 2187 Message: 2199

> does anybody have any info on the number of qsos possible with the 3B on
> a standard 9 volt alkaline battery? has anybody tried?
>
> mike ak3f

None...I would run down the battery just listening.

Vy 72;

Bob
w9ya

Liviu Librescu - ?n veci pomenirea lui.
(May his memory be eternal.)

2200. Re: [AT_Sprint] qso's per 9volt battery

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-20 16:12:27 UTC
From: Mark Langenfeld
Topic: 2187 Message: 2200

My results have been much like Bill's. A couple of hours and 10 - 20 short QSOs was about what I could expect with the ATS-3A on a fresh battery. Not bad for a quick, light outing. But I also agree that 6 AAs are ultimately the better bet. Like Steve says, 9V is the "sweet spot" for the ATS-series rigs.

Mark -- WA9ETW

> Before I got my Li-poly batteries, I usually ran my original ATS-3 in
> the Spartan Sprint with a single 9v alkaline battery. I think a -3B
> draws pretty close to the same current. During the two hours I
> usually alternated hunt-and-pounce with CQ'ing, and could make a dozen
> or two brief contacts. There was still enough juice at the end of the
> sprint for over 1 watt output. But I think a pack of AA's has a
> better QSO's-per-pound ratio, if you're not limited to two hours.
> -- Bill, AB1AV
>
> On 11/19/07, ak3f wrote:
>
> >
> > does anybody have any info on the number of qsos possible with the 3B
> > on a standard 9 volt alkaline battery? has anybody tried?
> >
> > mike ak3f
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
--

CoreComm Webmail.
http://home.core.com

2201. Re: First Field QSO's with ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-20 16:13:38 UTC
From: radio_kx0r
Topic: 2196 Message: 2201

--- In AT_Sprint@yahoogroups.com, <w9ya@...> wrote:

Bob,

Do you connect your 1/4 wave of balanced line to the end of the half wave wire, with one side of the balanced line unterminated at the top end?

That is the classic single "zepp" arrangement that's been around a long time. It's always been hard to understand, but it certainly works. I want to try it outdoors when I get a chance!

Or are you doing something else?

The motives for the direct connection with no feedline are simplicity and less stuff to carry. While it doesn't work as well as some other arrangements, the direct connection eliminates a quarter wave of feedline. This line - ladder or open - takes up almost as much space in a daypack as my entire rig, even for 20M. It also makes the operation visible to others, while a black wire in a tree is almost invisible.

The reason the end-fed half wave sloper is several db below a dipole is that most of the power goes up at high angles. This antenna is a cross between a half-wave vertical and a low half-wave dipole. By feeding the halfwave at the end, the current at the feedpoint is very low, and if the counterpoise is near 1/4 wave, or a multiple, it carries and wastes very little current. I tested this with several EZNEC models. The antenna has a broad azimuthal pattern, like a cardioid with a shallow null, with several db more signal in the direction opposite the high end of the antenna. The antenna has poor low-angle performance - the pure vertical arrangement has a lower-angle lobe - and most of the pattern is into the sky. For 20M it's not a great choice, even though it worked for me yesterday. However, for the low frequency bands it's a better deal, since we often have and enjoy high-angle propagation.

It's fun to experiment.
72,

Carey Fuller
KX0R

> Hey Cathy (I *think it is Cathy, the message seems unsigned) and the gang;
>
> Here's what I use to avoid placing the current node of the antenna

near
> the ground, where a portion of your signal goes to "heating up the
dirt":
>
> 1/2 wave of wire connected to a 1/4 wave of balanced feeder. It
looks and
> acts just like a j-pole. In my case the feeder line is the real
thing,
> i.e. some surplus N.O.S. balanced feeder, but you can use whatever
might
> be handy, including "window line" if it doesn't get wet. If you get
this
> cut just right, you don't need much, if any, tuner btw.
>
> You can use the 1/2 wave portion as a sloper, horiz. dipole,
inverted v,
> or even a vert.
>
> Slopers are great btw, and will work even better without the so-
called
> counterpoise.
>
> Vy 72;
>
> Bob
> w9ya
>
> > It was a warm afternoon here, so I hiked up into the woods with my
> > ATS-3B for its first use outdoors. The sun sets early, so I
didn't
> > mess with a dipole - just a half-wave sloper for 20 meters up 25
feet
> > or so in a pine tree. It connected to a BLT sitting on a log,
with a
> > 45-foot counterpoise lying in the grass. No feedline - no ground.
> >
> > The BLT tuned up fine in Hi-Z mode, and I got a good null. The
band
> > sounded too quiet, and at first I thought the band might be
going dead
> > - but before long I heard WA5PRI calling CQ, and we began a 45-
minute
> > rag chew from CO to Thibodaux, LA. It was pretty solid and
pleasant
> > right until the band fell out - sunset was somewhere near mid-
path, and
> > there are no sunspots.
> >
> > Right after we signed a local ham on an MFJ indoor loop called
me from

> > about 6 miles away. He was 599+ - we were line-of-sight from my
> > elevated site on a mesa.
> >
> > Anyhow, the rig performed perfectly, it was easy, solid as a
rock, an
> > amazing experience to use. All I could say was "WOW". It's a lot
> > easier to use than it is to build!
> >
> > Later I modelled the sloper on EZNEC, and found that it was down
> > almost 12 db compared to a dipole at 35 feet, in the direction of
> > Louisiana. It was still a good QSO. It helped being on the edge
of a
> > mesa, and the LA station had a beam.
> >
> > The end-fed simple antennas offer simplicity, fast setup, and a
> > minimal amount of stuff to carry. They don't model very well
> > compared to horizontal dipoles, loops, vees, and EDZ's. Classic
> > tradeoffs here.
> >
> > My BLT is overkill. I may build one of those L-network tuners
just to
> > play with it. To go really tiny, a mica variable might be worth
> > considering - another trade-off. When the polyvaricons dry up,
we'll
> > all be looking for alternatives.
>

2202. Re: qso's per 9volt battery

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-20 16:50:23 UTC
From: radio_kx0r
Topic: 2187 Message: 2202

--- In AT_Sprint@yahoogroups.com, "ak3f" <mbhayden@...> wrote:
>
> does anybody have any info on the number of qsos possible with the 3B
> on a standard 9 volt alkaline battery? has anybody tried?
>
> mike ak3f
>

Mike,

I haven't heard anyone say they were sorry for using lithium or NiMH rechargeables with this radio. It runs well from 6 to 12V, so you have many choices. Rechargeables cost much less in the long run, especially compared to 9V alkalines. Rechargeables have some other nice characteristics.

The number of QSO's depends on what you call a QSO. A contact in a contest doesn't take much energy. On the other hand, rag chew for an hour with 5W, and that Altoids box will get warm.

Many hours of ragchewing are possible with 2 or 3 18650 lithium ion cells (about 2 AH). My 3-cell lithium battery weighs 7 oz including the case, etc. Sorry, but I can't see a good reason to run this radio on 9V one-way batteries. If you don't want to get into lithium, shop around, and you can find good NiMH AA cells for about $2 per cell. The AAA's will run this radio a long time too.

There are lots of previous posts on this topic here - just search.

72,

carey Fuller
KX0R

2203. Re: [AT_Sprint] Re: First Field QSO's with ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-20 17:17:17 UTC
From: w9ya@qrparci.net
Topic: 2196 Message: 2203

Hey Carey and the gang;

> --- In AT_Sprint@yahoogroups.com, <w9ya@...> wrote:
>
> Bob,
>
> Do you connect your 1/4 wave of balanced line to the end of the half
> wave wire, with one side of the balanced line unterminated at the top
> end?

Yes

>
> That is the classic single "zepp" arrangement that's been around a long
> time. It's always been hard to understand, but it certainly works. I
> want to try it outdoors when I get a chance!

Similar to the zepp. Although many different coupling arrangements have
been attributed to the zepp, enough that this is somewhat clouded.

>
> Or are you doing something else?

Nope

>
> The motives for the direct connection with no feedline are simplicity
> and less stuff to carry. While it doesn't work as well as some other
> arrangements, the direct connection eliminates a quarter wave of
> feedline. This line - ladder or open - takes up almost as much space
> in a daypack as my entire rig, even for 20M. It also makes the
> operation visible to others, while a black wire in a tree is almost
> invisible.

Again, your antenna has current node(s) that are close to the ground. The
'j-pole' eliminates that issue. As such the 'j-pole' will radiate "better"
than what you are doing.

>
> The reason the end-fed half wave sloper is several db below a dipole is
> that most of the power goes up at high angles. This antenna is a cross
> between a half-wave vertical and a low half-wave dipole. By feeding
> the halfwave at the end, the current at the feedpoint is very low, and
> if the counterpoise is near 1/4 wave, or a multiple, it
> carries and wastes very little current. I tested this with several
> EZNEC models. The antenna has a broad azimuthal pattern, like a
> cardioid with a shallow null, with several db more signal in the

> direction opposite the high end of the antenna. The antenna has poor
> low-angle performance - the pure vertical arrangement has a lower- angle
> lobe - and most of the pattern is into the sky. For 20M it's not a
> great choice, even though it worked for me yesterday. However, for the
> low frequency bands it's a better deal, since we often have and enjoy
> high-angle propagation.

If you decide on a sloper, regardless of why or even what the radiation characteristics are, keeping any ground nodes from being near the physical ground ALWAYS helps in the strength of the overall radiated signal field. You are correct that the end of a 1/2 wave is a VOLTAGE node. The overall point is that this is a better node to place low/closer to the ground as opposed to a current node. Adding a counterpoise wire to lower the attachment impedance (instead of a transformer,) puts CURRENT node(s) closer to the ground, and this can be a real detriment for any antenna configuration.

BTW, the 'transformer' can be a 1/4 wave matching section, a coupled 'tank circuit', a z-match or even a two element tuner with sufficient range. The open wire transmission line I use is very high q., so it is perhaps the most efficient. Unlike window line, it is marginally heavier and bulker. It is not even as heavy as the coax used in a center-fed dipole.

In summary;

A sloper without the radiation/pattern issues of the (extra/unwanted) counterpoise is a great antenna.

An additional advantage to the "j-pole" is the ability to hang it the other various configurations at will, as the 1/4 wave transformer allows you great positional leverage -> i.e. you can get this hung just about any-which-a-way, including as a horizontally oriented dipole, albeit 1/4 wave high.

Vy 72;

Bob
w9ya

>
> It's fun to experiment.
> 72,
>
> Carey Fuller
> KX0R
>
>> Hey Cathy (I *think it is Cathy, the message seems unsigned) and
> the gang;
>>
>> Here's what I use to avoid placing the current node of the antenna
> near
>> the ground, where a portion of your signal goes to "heating up the

> dirt":
>>
>> 1/2 wave of wire connected to a 1/4 wave of balanced feeder. It
> looks and
>> acts just like a j-pole. In my case the feeder line is the real
> thing,
>> i.e. some surplus N.O.S. balanced feeder, but you can use whatever
> might
>> be handy, including "window line" if it doesn't get wet. If you get
> this
>> cut just right, you don't need much, if any, tuner btw.
>>
>> You can use the 1/2 wave portion as a sloper, horiz. dipole,
> inverted v,
>> or even a vert.
>>
>> Slopers are great btw, and will work even better without the so-
> called
>> counterpoise.
>>
>> Vy 72;
>>
>> Bob
>> w9ya
>>
>> > It was a warm afternoon here, so I hiked up into the woods with my
>> ATS-3B for its first use outdoors. The sun sets early, so I
> didn't
>> > mess with a dipole - just a half-wave sloper for 20 meters up 25
> feet
>> > or so in a pine tree. It connected to a BLT sitting on a log,
> with a
>> > 45-foot counterpoise lying in the grass. No feedline - no ground.
>> >
>> > The BLT tuned up fine in Hi-Z mode, and I got a good null. The
> band
>> > sounded too quiet, and at first I thought the band might be
> going dead
>> > - but before long I heard WA5PRI calling CQ, and we began a 45-
> minute
>> > rag chew from CO to Thibodaux, LA. It was pretty solid and
> pleasant
>> > right until the band fell out - sunset was somewhere near mid-
> path, and
>> > there are no sunspots.
>> >
>> > Right after we signed a local ham on an MFJ indoor loop called
> me from
>> > about 6 miles away. He was 599+ - we were line-of-sight from my
>> elevated site on a mesa.

>> >
>> > Anyhow, the rig performed perfectly, it was easy, solid as a
> rock, an
>> > amazing experience to use. All I could say was "WOW". It's a lot
>> easier to use than it is to build!
>> >
>> > Later I modelled the sloper on EZNEC, and found that it was down
>> almost 12 db compared to a dipole at 35 feet, in the direction of
>> Louisiana. It was still a good QSO. It helped being on the edge
> of a
>> > mesa, and the LA station had a beam.
>> >
>> > The end-fed simple antennas offer simplicity, fast setup, and a
>> minimal amount of stuff to carry. They don't model very well
>> > compared to horizontal dipoles, loops, vees, and EDZ's. Classic
>> tradeoffs here.
>> >
>> > My BLT is overkill. I may build one of those L-network tuners
> just to
>> > play with it. To go really tiny, a mica variable might be worth
>> considering - another trade-off. When the polyvaricons dry up,
> we'll
>> > all be looking for alternatives.

Liviu Librescu - ?n veci pomenirea lui.
(May his memory be eternal.)

2204. Re: [AT_Sprint] Re: qso's per 9volt battery

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-20 17:30:57 UTC
From: Gil Stacy
Topic: 2187 Message: 2204
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2205. Filter boards for 3B question!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-20 20:18:39 UTC
From: mpupeza
Topic: 2205 Message: 2205

Hi;
I've just received one of Steve's last of his 2nd batch run of the 3B kits. Yippee!
Now a question!
How do you separate the filter boards?
I see that they're scored and I assume that you just snap them apart!
However, as I was flexing it, there seemed to be no real tendency to break at the scoring, so I quit.
Now I'm the guy that even toilet paper fails to separate cleanly at the perforations, same with paper towels, so you see why I'm nervous!
Also, I've decided to solder the parts individually! That way I can only screw up a small section at a time, rather than the whole board!
Advice appreciated.
73
Mike VE3EQP/W4.....>

2206. Re: Filter boards for 3B question!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-20 20:24:22 UTC
From: Randal
Topic: 2205 Message: 2206

Mike,

Yes they just "snap" apart. With the score line toward you gently bend
away from you.

Good Luck

W1IN
>

2207. Re: [AT_Sprint] Filter boards for 3B question!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-20 20:25:55 UTC
From: Michael Harnage
Topic: 2205 Message: 2207

Snap them quick.

If you are still timid, align the scored edge up with
a sharp counter edge and use your palm to snap them.

-mike/w1mt

--- mpupeza <mpupeza@...> wrote:

> How do you separate the filter boards?
> I see that they're scored and I assume that you just
> snap them apart!
> However, as I was flexing it, there seemed to be no
> real tendency to
> break at the scoring, so I quit.

_____
Never miss a thing. Make Yahoo your home page.
http://www.yahoo.com/r/hs

2208. Re: [AT_Sprint] Re: qso's per 9volt battery

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-20 20:58:01 UTC
From: mbhayden
Topic: 2187 Message: 2208

thanks to you all the the feedback. i'll certainly be going with a 2-3 cell lithium setup. but the ability to do something with a buy-it-anywhere-you-are 9v alkaline and still do something meaningful is really neat.

i finished up the qbsa last night. will now get back on finishing the 3b. it sure is amazing, it's even more intriguing than my k1, which i also enjoy.

2209. Re: [AT_Sprint] Re: First Field QSO's with ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-20 21:01:03 UTC
From: w9ya@qrparci.net
Topic: 2196 Message: 2209

OOPS !... Minor correct noted below.

Bob
w9ya

> Hey Carey and the gang;
>
>> --- In AT_Sprint@yahoogroups.com, <w9ya@...> wrote:
>>
>> Bob,
>>
>> Do you connect your 1/4 wave of balanced line to the end of the half
>> wave wire, with one side of the balanced line unterminated at the top
>> end?
>
> Yes
>
>>
>> That is the classic single "zepp" arrangement that's been around a
>> long time. It's always been hard to understand, but it certainly
>> works. I want to try it outdoors when I get a chance!
>
> Similar to the zepp. Although many different coupling arrangements have
> been attributed to the zepp, enough that this is somewhat clouded.
>
>>
>> Or are you doing something else?
>
> Nope
>
>>
>> The motives for the direct connection with no feedline are simplicity
>> and less stuff to carry. While it doesn't work as well as some other
>> arrangements, the direct connection eliminates a quarter wave of
>> feedline. This line - ladder or open - takes up almost as much space
>> in a daypack as my entire rig, even for 20M. It also makes the
>> operation visible to others, while a black wire in a tree is almost
>> invisible.
>
> Again, your antenna has current node(s) that are close to the ground.
> The 'j-pole' eliminates that issue. As such the 'j-pole' will radiate
> "better" than what you are doing.
>
>>
>> The reason the end-fed half wave sloper is several db below a dipole

>> is that most of the power goes up at high angles. This antenna is a
>> cross between a half-wave vertical and a low half-wave dipole. By
>> feeding the halfwave at the end, the current at the feedpoint is very
>> low, and if the counterpoise is near 1/4 wave, or a multiple, it
>> carries and wastes very little current. I tested this with several
>> EZNEC models. The antenna has a broad azimuthal pattern, like a
>> cardioid with a shallow null, with several db more signal in the
>> direction opposite the high end of the antenna. The antenna has poor
>> low-angle performance - the pure vertical arrangement has a lower-
>> angle lobe - and most of the pattern is into the sky. For 20M it's
>> not a great choice, even though it worked for me yesterday. However,
>> for the low frequency bands it's a better deal, since we often have
>> and enjoy high-angle propagation.
>
>
> If you decide on a sloper, regardless of why or even what the radiation
> characteristics are, keeping any ground nodes from being near the

Above should read ...., keeping any CURRENT nodes from being near the....

> physical ground ALWAYS helps in the strength of the overall radiated
> signal field. You are correct that the end of a 1/2 wave is a VOLTAGE
> node. The overall point is that this is a better node to place
> low/closer to the ground as opposed to a current node. Adding a
> counterpoise wire to lower the attachment impedance (instead of a
> transformer,) puts CURRENT node(s) closer to the ground, and this can be
> a real detriment for any antenna configuration.
>
> BTW, the 'transformer' can be a 1/4 wave matching section, a coupled
> 'tank circuit', a z-match or even a two element tuner with sufficient
> range. The open wire transmission line I use is very high q., so it is
> perhaps the most efficient. Unlike window line, it is marginally heavier
> and bulker. It is not even as heavy as the coax used in a center-fed
> dipole.
>
> In summary;
>
> A sloper without the radiation/pattern issues of the (extra/unwanted)
> counterpoise is a great antenna.
>
> An additional advantage to the "j-pole" is the ability to hang it the
> other various configurations at will, as the 1/4 wave transformer allows
> you great positional leverage -> i.e. you can get this hung just about
> any-which-a-way, including as a horizontally oriented dipole, albeit 1/4
> wave high.
>
> Vy 72;
>
> Bob
> w9ya
>

>
>>
>> It's fun to experiment.
>> 72,
>>
>> Carey Fuller
>> KX0R
>>
>>> Hey Cathy (I *think it is Cathy, the message seems unsigned) and
>> the gang;
>>>
>>> Here's what I use to avoid placing the current node of the antenna
>> near
>>> the ground, where a portion of your signal goes to "heating up the
>> dirt":
>>>
>>> 1/2 wave of wire connected to a 1/4 wave of balanced feeder. It
>> looks and
>>> acts just like a j-pole. In my case the feeder line is the real
>> thing,
>>> i.e. some surplus N.O.S. balanced feeder, but you can use whatever
>> might
>>> be handy, including "window line" if it doesn't get wet. If you get
>> this
>>> cut just right, you don't need much, if any, tuner btw.
>>>
>>> You can use the 1/2 wave portion as a sloper, horiz. dipole,
>> inverted v,
>>> or even a vert.
>>>
>>> Slopers are great btw, and will work even better without the so-
>> called
>>> counterpoise.
>>>
>>> Vy 72;
>>>
>>> Bob
>>> w9ya
>>>
>>> > It was a warm afternoon here, so I hiked up into the woods with my
>>> ATS-3B for its first use outdoors. The sun sets early, so I
>> didn't
>>> > mess with a dipole - just a half-wave sloper for 20 meters up 25
>> feet
>>> > or so in a pine tree. It connected to a BLT sitting on a log,
>> with a
>>> > 45-foot counterpoise lying in the grass. No feedline - no ground.
>>> >
>>> > The BLT tuned up fine in Hi-Z mode, and I got a good null. The
>> band

>>> > sounded too quiet, and at first I thought the band might be
>> going dead
>>> > - but before long I heard WA5PRI calling CQ, and we began a 45-
>> minute
>>> > rag chew from CO to Thibodaux, LA. It was pretty solid and
>> pleasant
>>> > right until the band fell out - sunset was somewhere near mid-
>> path, and
>>> > there are no sunspots.
>>> >
>>> > Right after we signed a local ham on an MFJ indoor loop called
>> me from
>>> > about 6 miles away. He was 599+ - we were line-of-sight from my
>>> elevated site on a mesa.
>>> >
>>> > Anyhow, the rig performed perfectly, it was easy, solid as a
>> rock, an
>>> > amazing experience to use. All I could say was "WOW". It's a lot
>>> easier to use than it is to build!
>>> >
>>> > Later I modelled the sloper on EZNEC, and found that it was down
>>> almost 12 db compared to a dipole at 35 feet, in the direction of
>>> Louisiana. It was still a good QSO. It helped being on the edge
>> of a
>>> > mesa, and the LA station had a beam.
>>> >
>>> > The end-fed simple antennas offer simplicity, fast setup, and a
>>> minimal amount of stuff to carry. They don't model very well
>>> > compared to horizontal dipoles, loops, vees, and EDZ's. Classic
>>> tradeoffs here.
>>> >
>>> > My BLT is overkill. I may build one of those L-network tuners
>> just to
>>> > play with it. To go really tiny, a mica variable might be worth
>>> considering - another trade-off. When the polyvaricons dry up,
>> we'll
>>> > all be looking for alternatives.
>
>
> Liviu Librescu - ?n veci pomenirea lui.
> (May his memory be eternal.)

Liviu Librescu - ?n veci pomenirea lui.
(May his memory be eternal.)

2210. Nice label uploaded to "Generic ATS3B Label" in Files section

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-20 22:42:41 UTC
From: kc7fys
Topic: 2210 Message: 2210

He's being subtle about it, but there's a very handsome label for the
3B just uploaded to the Generic ATS3B Label folder in the Files
section. JN1GLB has designed a good-looking and informative label that
would look good printed on transparent film or opaque paper.
Nice work!
<http://f1.grp.yahoofs.com/v1/4FhDR7GfWRUgkGfU9yXszlQCidruvr5A1cju8A5D4nklp_oB1iv7_WSilpAk
Cctt59wpWHWTG4MiIWx4woR9Jn1_3UIR/Generic%20ATS3B%20Label/Label_JN1GLB.pdf>
Jonathan KC7FYS

2211. An additional run of the ATS-3C ...or D?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-21 01:29:44 UTC
From: tf3kx
Topic: 2211 Message: 2211

I presume the ATS-3C is sold out. It would be good to hear if an additional run of this model, or possibly the next one, is on the plan somewhere.

I am deliberating if I should continue saving up for a K2 or go for the ATS when they become available...

73 - Kristinn, TF3KX

2212. Re: Rotary Encoder for ATS-3

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-21 01:30:00 UTC
From: eplerkeppler
Topic: 2185 Message: 2212

Steve,

I can't seem to find those files.

Mind posting the direct link to them or even reposting the files?

Thanks,

-- Charles

--- In AT_Sprint@yahoogroups.com, "Steve White" <stever1k@...> wrote:
>
> Has anyone tried building the Rotary Encoder from the the files that
> Anders SM5EFX has posted in the Files section? I am interested in
> this and would like to find out how well it worked and had some
> questions regarding the interface of the circuit to the ATS3.
>
> Steve NU0P
>

2213. Re: [AT_Sprint] An additional run of the ATS-3C ...or D?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-21 01:41:13 UTC
From: Kurt Savegnago
Topic: 2211 Message: 2213

Hi,

He had mentioned about the possibility of a 3rd run
of the 3b after the holidays. I imagine getting the
parts together for the first 200 kits must have been
quite an undertaking. To my knowledge, I haven't
heard
of any plans of a 3c yet.

Kurt KC9LDH
--- tf3kx <kristinn1@...> wrote:

> I presume the ATS-3C is sold out. It would be good
> to hear if an
> additional run of this model, or possibly the next
> one, is on the plan
> somewhere.
>
> I am deliberating if I should continue saving up for
> a K2 or go for the
> ATS when they become available...
>
> 73 - Kristinn, TF3KX
>
>
>
>
> Yahoo! Groups Links
>
>
>
>
>

Slackware user since 1994

2214. Re: [AT_Sprint] An additional run of the ATS-3C ...or D?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-21 02:23:01 UTC
From: Michael Harnage
Topic: 2211 Message: 2214

3b is currently out of stock. May be more next year.
That's up to Steve.

As far as the K2. Save up and get it! Then when Steve
kits another round of ATS rigs, get it too.

-mike/w1mt

--- tf3kx <kristinn1@...> wrote:

> I presume the ATS-3C is sold out. It would be good
> to hear if an
> additional run of this model, or possibly the next
> one, is on the plan
> somewhere.
>
> I am deliberating if I should continue saving up for
> a K2 or go for the
> ATS when they become available...
>
> 73 - Kristinn, TF3KX
>
>
>
>
> Yahoo! Groups Links
>
>
>
>
>

Get easy, one-click access to your favorites.
Make Yahoo! your homepage.
http://www.yahoo.com/r/hs

2215. Re: [AT_Sprint] Re: Rotary Encoder for ATS-3

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-21 02:24:58 UTC
From: Michael Harnage
Topic: 2185 Message: 2215

< http://groups.yahoo.com/group/AT_Sprint/files/ >

Scroll down till you see the encoder file and click on
it.

-mike/w1mt

--- eplerkeppler <eplerkeppler@...> wrote:

> Steve,
>
> I can't seem to find those files.
>

Be a better sports nut! Let your teams follow you
with Yahoo Mobile. Try it now.
http://mobile.yahoo.com/sports;_ylt=At9_qDKvtAbMuh1G1SQtBI7ntAcJ

2216. Re: [AT_Sprint] An additional run of the ATS-3C ...or D?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-21 03:16:08 UTC
From: Steven Weber
Topic: 2211 Message: 2216

>I presume the ATS-3C is sold out. It would be good to hear if an
>additional run of this model, or possibly the next one, is on the plan
>somewhere.
>

I'll most likely offer them again next summer. Why so long a wait? I'm planning on another AT hike in the spring and will be gone all of April and May. December is a wash out with the holidays and such. Nothing ever gets done in December. Next thing you know its the middle of January. It takes me 4-6 weeks to collect parts, sometimes more if something is out of stock and back ordered. By the time everything is ready, its time to go on the hiking trip!

I think we've taken the ATS rig concept as far as it can go and still fit it into an Altoids tin. Therefore, a C or D version is not likely. The next major design project is for a little 20 to 10 meter SSB rig. I've been poking at it on and off, but am not in a big rush to get it done. There will be no great demand for it until we get some sunspots, hopefully in a year or two! It will be nice to have a rig like that ready for when the cycle starts to pick up.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2217. Free ATS3-B Labels

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-21 03:40:40 UTC
From: WA0ITP
Topic: 2217 Message: 2217

If you'd like one of these for your 3B, just drop me an email and I'll send
it to you via USPS. They're completely free, no need for an sase.

http://www.wa0dx.org/wa0itp/ats3b.html

I love this radio stuff!
72 73
Terry, WA?ITP
http://www.wa0dx.org/wa0itp
http://www.wa0dx.org
http://www.4sqrp.com/

2218. Re: [AT_Sprint] An additional run of the ATS-3C ...or D?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-21 03:48:43 UTC
From: Hank Greeb
Topic: 2211 Message: 2218

Thanks, Steve, for the update.

I can wait till summer. I'll start saving my pennies now in anticipation. My finances were strapped at the time you made the first two runs of the kits.

Lettuce no your hiking plans. I'll try to work you. It was great working you from Virginia during your last trek along the AT. I was operating WQ8RP and was very surprised at the "VA" in the QRPTTF exchange!

72/73 de n8xx Hg

Steven Weber wrote:
>> I presume the ATS-3C is sold out. It would be good to hear if an
>> additional run of this model, or possibly the next one, is on the plan
>> somewhere.
>>
>>
>>
>>
>>
> I'll most likely offer them again next summer. Why so long a wait? I'm planning on another AT hike in the spring and will be gone all of April and May. December is a wash out with the holidays and such. Nothing ever gets done in December. Next thing you know its the middle of January. It takes me 4-6 weeks to collect parts, sometimes more if something is out of stock and back ordered. By the time everything is ready, its time to go on the hiking trip!
>
> I think we've taken the ATS rig concept as far as it can go and still fit it into an Altoids tin. Therefore, a C or D version is not likely. The next major design project is for a little 20 to 10 meter SSB rig. I've been poking at it on and off, but am not in a big rush to get it done. There will be no great demand for it until we get some sunspots, hopefully in a year or two! It will be nice to have a rig like that ready for when the cycle starts to pick up.
>
>
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com

2219. NR4E filter mods to ATS-3

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-21 05:59:27 UTC
From: DOUG PHILLIPS
Topic: 246 Message: 2219

Guys,

I finally got around to installing Craig's mods to my ATS-III, the one prior to ATS-3A and ATS-3B. If any of you have an original 3 do the filter mods, very nice sound coming out of the head phones this evening. Details are on W1MT's web site:

http://w1mt.qrpradio.com/filter.html

I have an extra mod kit if anyone wants one and I think NR4E still has them available also.

73, Doug W7RDP

2220. Re: An additional run of the ATS-3C ...or D?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-21 06:37:46 UTC
From: radio_kx0r
Topic: 2211 Message: 2220

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:

Steve,

We really appreciate your offering these amazing kits. Please enjoy your hikes and continue being creative. I think the ATS-3B is almost perfect for what it's meant to be, and it wouldn't surprise me if you could sell some more of them if you choose to.

I'm interested in your HF SSB rig concept. When the sunspots return, SSB will provide lots of thrills for low power operators. SSB has some different qualities - like you can tell people you're portable, etc. quickly, ask questions fast, move the qso along, whatever.

Whatever you come up with will be interesting to many of us. Thanks for sharing your thoughts on what you're working on.

72/73

Carey Fuller
KX0R

> >I presume the ATS-3C is sold out. It would be good to hear if an
> >additional run of this model, or possibly the next one, is on the
plan
> >somewhere.
> >
>
> I'll most likely offer them again next summer. Why so long a wait?
I'm
> planning on another AT hike in the spring and will be gone all of
April and
> May. December is a wash out with the holidays and such. Nothing
ever gets
> done in December. Next thing you know its the middle of January. It
takes
> me 4-6 weeks to collect parts, sometimes more if something is out
of stock
> and back ordered. By the time everything is ready, its time to go
on the
> hiking trip!
>
> I think we've taken the ATS rig concept as far as it can go and
still fit
> it into an Altoids tin. Therefore, a C or D version is not likely.
The next
> major design project is for a little 20 to 10 meter SSB rig. I've

been
> poking at it on and off, but am not in a big rush to get it done.
There
> will be no great demand for it until we get some sunspots,
hopefully in a
> year or two! It will be nice to have a rig like that ready for when
the
> cycle starts to pick up.
>
>
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com
>

2221. Re: Rotary Encoder for ATS-3

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-21 09:06:01 UTC
From: Steve White
Topic: 2185 Message: 2221

Charles

It looks like some one has already told you where to find the file, in
the files section of course....I have tried emailing Anders SM5EFX
using an email address I got from qsl.com but have no idea if it is
any good at all. If anyone knows where I can reach him I would
appreciate that. Or anyone can tell me their experiences with this
Rotary Dial.

Steve NU0P

--- In AT_Sprint@yahoogroups.com, "eplerkeppler" <eplerkeppler@...> wrote:
>
> Steve,
>
> I can't seem to find those files.
>
> Mind posting the direct link to them or even reposting the files?
>
>
> Thanks,
>
> -- Charles
>
>
> --- In AT_Sprint@yahoogroups.com, "Steve White" <stever1k@> wrote:
> >
> > Has anyone tried building the Rotary Encoder from the the files that
> > Anders SM5EFX has posted in the Files section? I am interested in
> > this and would like to find out how well it worked and had some
> > questions regarding the interface of the circuit to the ATS3.
> >
> > Steve NU0P
> >
>

2222. Future SSB kit

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-21 10:01:49 UTC
From: Milan
Topic: 2211 Message: 2222

Steve,
acording start interest of the your annunciated HF SSB
project,
I think that you have to make list of the aspirant like
Virgil K5OOR did.
If that happends put me on the list :).

Milan
YU7NS

2223. RE: [AT_Sprint] NR4E filter mods to ATS-3

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-21 12:38:03 UTC
From: Dale Putnam
Topic: 246 Message: 2223

Hi Doug,
I need the filter kit, what would you need to allow it to be used in a nice radio?
thank you, --... ...--Dale - WC7S in Wy

To: AT_Sprint@yahoogroups.comFrom: w7rdp@...: Tue, 20 Nov 2007 21:59:27 -0800Subject: [AT_Sprint] NR4E filter mods to ATS-3

Guys,I finally got around to installing Craig's mods to my ATS-III, the one prior to ATS-3A and ATS-3B. If any of you have an original 3 do the filter mods, very nice sound coming out of the head phones this evening. Details are on W1MT's web site:http://w1mt.qrpradio.com/filter.htmlI have an extra mod kit if anyone wants one and I think NR4E still has them available also.73, Doug W7RDP

_____
Your smile counts. The more smiles you share, the more we donate. Join in.
www.windowslive.com/smile?ocid=TXT_TAGLM_Wave2_oprsmilewlhmtagline

2224. RE: [AT_Sprint] Free ATS3-B Labels

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-21 12:48:08 UTC
From: Dale Putnam
Topic: 2217 Message: 2224

Hi Terry,
Hey, I am so happy you mentioned this, I am building one for a fellow, and I have messed mine up, maybe I could talk you out of two?
Thank you,

--... ...--Dale - WC7S in Wy

To: AT_Sprint@yahoogroups.comFrom: wa0itp@...: Tue, 20 Nov 2007 21:40:40 -0600Subject: [AT_Sprint] Free ATS3-B Labels

If you'd like one of these for your 3B, just drop me an email and I'll send it to you via USPS. They're completely free, no need for an sase.http://www.wa0dx.org/wa0itp/ats3b.html----------I love this radio stuff!72 73Terry,
WAØITPhttp://www.wa0dx.org/wa0itphttp://www.wa0dx.orghttp://www.4sqrp.com/

_____
You keep typing, we keep giving. Download Messenger and join the i’m Initiative now.
http://im.live.com/messenger/im/home/?source=TAGLM

2225. RE: [AT_Sprint] Free ATS3-B Labels

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-21 12:49:17 UTC
From: Dale Putnam
Topic: 2217 Message: 2225

And it would help if I included my address... (another cup of coffee please)

WC7S
5503 N. College Dr.
Cheyenne, Wy. 82009

Thanks, Terry.--... ...--Dale - WC7S in Wy

To: AT_Sprint@yahoogroups.comFrom: wa0itp@...mDate: Tue, 20 Nov 2007 21:40:40 -0600Subject: [AT_Sprint] Free ATS3-B Labels

If you'd like one of these for your 3B, just drop me an email and I'll send it to you via USPS. They're completely free, no need for an sase.http://www.wa0dx.org/wa0itp/ats3b.html----------I love this radio stuff!72 73Terry,
WAØITPhttp://www.wa0dx.org/wa0itphttp://www.wa0dx.orghttp://www.4sqrp.com/

Your smile counts. The more smiles you share, the more we donate. Join in.
www.windowslive.com/smile?ocid=TXT_TAGLM_Wave2_oprsmilewlhmtagline

2226. RE: [AT_Sprint] An additional run of the ATS-3C ...or D?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-21 12:55:22 UTC
From: Dale Putnam
Topic: 2211 Message: 2226

Put me down for one, please. The timing may be much better for me this time around. And.. one can
never never have too many of a really good radio. And the 3C is a really good radio.
Thank you, Steve--... ...--Dale - WC7S in Wy

_____
Your smile counts. The more smiles you share, the more we donate. Join in.
www.windowslive.com/smile?ocid=TXT_TAGLM_Wave2_oprsmilewlhmtagline

2227. Re: An additional run of the ATS-3C ...or D?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-21 13:49:48 UTC
From: shadle
Topic: 2211 Message: 2227

Steve,
This is exciting news! May I just make a plug to keep it an SMT kit
where possible? I really enjoyed the SMT kit-building experience with
the ATS-3B (although others may differ in their opinions of it). :)
73
-john

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
>
> I think we've taken the ATS rig concept as far as it can go and
still fit
> it into an Altoids tin. Therefore, a C or D version is not likely.
The next
> major design project is for a little 20 to 10 meter SSB rig. I've been
> poking at it on and off, but am not in a big rush to get it done. There
> will be no great demand for it until we get some sunspots, hopefully
in a
> year or two! It will be nice to have a rig like that ready for when the
> cycle starts to pick up.

2228. Re: [AT_Sprint] Free ATS3-B Labels

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-21 14:56:40 UTC
From: WA0ITP
Topic: 2217 Message: 2228

You bet Dale,

What call letters would you like on them. Are they 3B's?

Happy to help..

I love this radio stuff!
72 73
Terry, WAØITP
http://www.wa0dx.org/wa0itp
http://www.wa0dx.org
http://www.4sqrp.com/
----- Original Message -----
From: Dale Putnam
To: at_sprint@yahoogroups.com
Sent: Wednesday, November 21, 2007 6:48 AM
Subject: RE: [AT_Sprint] Free ATS3-B Labels

Hi Terry,
Hey, I am so happy you mentioned this, I am building one for a fellow, and I have messed mine up, maybe I could talk you out of two?
Thank you,

--... ...--
Dale - WC7S in Wy

To: AT_Sprint@yahoogroups.com
From: wa0itp@...
Date: Tue, 20 Nov 2007 21:40:40 -0600
Subject: [AT_Sprint] Free ATS3-B Labels

If you'd like one of these for your 3B, just drop me an email and I'll send
it to you via USPS. They're completely free, no need for an sase.

http://www.wa0dx.org/wa0itp/ats3b.html

I love this radio stuff!
72 73
Terry, WAØITP
http://www.wa0dx.org/wa0itp
http://www.wa0dx.org
http://www.4sqrp.com/

You keep typing, we keep giving. Download Messenger and join the i’m Initiative now. Join

in!

No virus found in this incoming message.
Checked by AVG Free Edition.
Version: 7.5.503 / Virus Database: 269.16.2/1142 - Release Date: 11/20/2007 5:44 PM

2229. Re: [AT_Sprint] Re: An additional run of the ATS-3C ...or D?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-21 17:00:59 UTC
From: Steven Weber
Topic: 2211 Message: 2229

>This is exciting news! May I just make a plug to keep it an SMT kit
>where possible? I really enjoyed the SMT kit-building experience with
>the ATS-3B (although others may differ in their opinions of it). :)

You can count on it being mostly SMT!
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2230. eHam.net reviews?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-21 17:31:56 UTC
From: John Shadle
Topic: 2230 Message: 2230

Looks like only one so far...

http://www.eham.net/reviews/detail/6991

Anyone else willing to put in their $.02?

-john W4PAH

2231. Re: [AT_Sprint] eHam.net reviews?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-21 17:47:33 UTC
From: john
Topic: 2230 Message: 2231

As you could tell, I liked it! :-)

John K5MO

---- John Shadle <shadle@...> wrote:
> Looks like only one so far...
>
> http://www.eham.net/reviews/detail/6991
>
> Anyone else willing to put in their $.02?
>
> -john W4PAH
>
>
>
>
>
> Yahoo! Groups Links
>
>
>

2232. Re: eHam.net reviews?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-21 18:22:31 UTC
From: radio_kx0r
Topic: 2230 Message: 2232

--- In AT_Sprint@yahoogroups.com, John Shadle <shadle@...> wrote:
John,

I'm going to write one. Mine will be very positive. It will be hard
not to rave about this radio.

Carey Fuller
KX0R

> Looks like only one so far...
>
> http://www.eham.net/reviews/detail/6991
>
> Anyone else willing to put in their $.02?
>
> -john W4PAH
>

2233. Re: [AT_Sprint] New build for ATS-3a?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-21 18:42:33 UTC
From: n0tu/Steve
Topic: 2175 Message: 2233

Jess, Sri slow reply here. My current webpage
[http://www.angelfire.com/planet/goatman/]
only has some old pics of QRP rigs
[http://picasaweb.google.com/n0tu.qrp/HBqrpRIGS/photo#s5135343404607943362]
I've built over the years for trail use. I missed the rockmite mainia?
...guess I was busy with my other hobbies goats and photography!

Happy Holidays! Steve

On Nov 19, 2007 11:47 AM, jess gypin <ontarget1911@...> wrote:
>
>
> By the way, do you still have your Rockmite page up somewhere? I had a kit
> given to me and also may have one of the mighty cases coming and may just
> build that one first and could really use some inspiration there. It has
> been 3 years since I built my last kit for a friend and that was a K2/100.
>
> Jess <><AE0CW
>
>
>
>
> On 11/19/07, jess gypin <ontarget1911@...> wrote:
> >
> > Thanks Steve. I probably got the right kit I think, I am never on 15
> meters. BUT I could reallty use a band board that would work on 17 meters.
> Maybe I can get a band board from Steve and figure out the filter and
> component values for an 18 meter board.
> >
> > Jess
> >
> >
> >
> > On 11/19/07, n0tu/Steve <n0tu.qrp@... > wrote:
> > >
> > >
> > >
> > >
> > >
> > >
> > > Jess ...on the performance aspect expect better than the KX1! IMHO
> > > BTW the BEE version does 80-15m Steve/n0tu
> > >
> > >
> > > On Nov 19, 2007 11:30 AM, jess gypin <ontarget1911@... > wrote:

> > > >
> > > >
> > > > I am pretty sure that this kit is a 3A, but not completely. The board
> just
> > > > says AT SPRINT III with KD1JV below that. The mabual CD c=says it is
> rev C.
> > > > What can I look for to detemine whic rev it is and if there are any
> mods
> > > > that will need to be made to make the radio run it's best?
> > > >
> > > > And man! are there a lot of small parts! What is the average build
> time on
> > > > one of these. I have a lot of good soldering experience having built
> over
> > > > 100 QRP kits and soldering for a living at the beginning of my career,
> but
> > > > no surface mount experience. I noticed in the files and pics that
> there is a
> > > > fixture that some have built to keep the parts in place while
> soldering. Is
> > > > there one version of this that some have found to be more efficient
> than
> > > > others?
> > > >
> > > > And finally, what kind of performance can I expect from this rig? I
> have
> > > > built and owned several K1s and KX1s for friends and others and wonder
> how
> > > > this compares? The modules that are marked for this are 20,30,40 and
> 80.
> > > > Isn't the newer version include higher bands?
> > > >
> > > > Thanks for taking the time to look at my silly questions.
> > > >
> > > > Jess AE0CW<><
> > > >
> > > >
> > >
> > >
> > >
> > >
> > >
> > >
> >
> >
>
>

2234. Re: An additional run of the ATS-3C ...or D?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-21 19:55:11 UTC
From: tf3kx
Topic: 2211 Message: 2234

Sorry folks, I was somehow mistaken that the latest version was 3C.
So, the real question should have been when a second run of the 3B
(or a new 3C) would be available.

Thanks for your replies, Steve - wish you all the best for the
holidays and your hiking in the spring. If you have a list of orders
for the next kit, you may add me to it.

73 - Kristinn, TF3KX / kristinn1 (at) gmail.com

--- In AT_Sprint@yahoogroups.com, Kurt Savegnago <ksaves2@...> wrote:
>
> Hi,
>
> He had mentioned about the possibility of a 3rd run
> of the 3b after the holidays. I imagine getting the
> parts together for the first 200 kits must have been
> quite an undertaking. To my knowledge, I haven't
> heard
> of any plans of a 3c yet.
>
> Kurt KC9LDH
> --- tf3kx <kristinn1@...> wrote:
>
> > I presume the ATS-3C is sold out. It would be good
> > to hear if an
> > additional run of this model, or possibly the next
> > one, is on the plan
> > somewhere.
> >
> > I am deliberating if I should continue saving up for
> > a K2 or go for the
> > ATS when they become available...
> >
> > 73 - Kristinn, TF3KX
> >
> >
> >
> >
> > Yahoo! Groups Links
> >
> >
> >
> >
> >
>

>
> Slackware user since 1994
>

2235. Portable/Desl Version?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-21 20:02:32 UTC
From: WA0ITP
Topic: 2235 Message: 2235

Has anyone considered pulling together some of Steve's designs into a slightly larger rig for desk or portable ops?. Perhaps combining the QBSA and an ATS3 into one case, and switching the band modules?

Just wondering out loud..

I love this radio stuff!
72 73
Terry, WA?ITP
http://www.wa0dx.org/wa0itp
http://www.wa0dx.org
http://www.4sqrp.com/

2236. Re: eHam.net reviews?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-21 20:07:31 UTC
From: Randal
Topic: 2230 Message: 2236

Hold on there! Think about what you are doing.
When I completed my BEE I thought about writing a review on EHam but before penning such I gave it some thought.

Remember last winter/early spring when Steve mentioned that he had an updated version of the ATS? Then as conversations and guesses about the configuration rampaged, Steve went on "walk about". Meandering about the trail having a good time communing with nature and wearing out boots while we waited ... and waited.

I am certain that Steve's pleasure during this period was diminished a bit knowing that he left us all hanging on tender hooks. Given the fact that the Bee is sold out and won't be renewed until after Steve's next sojourn into the forest do we really want to burden him with all of that guilt worrying about all those folks who read the review, would kill to get their hands on a kit and there are none to be had? Can you imagine the responsibility? That would be a cruel thing to do to poor Steve!

OH WHAT THE HECK! Go ahead he'll get over it.

72,
Ran

I'll give up my Bee when they pry it from my cold dead hands!

2237. RE: [AT_Sprint] Free ATS3-B Labels

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-21 19:21:28 UTC
From: Dale Putnam
Topic: 2217 Message: 2237

Hi Terry,
The calls are WB9ZUV and WC7S
The one for WC7S is a 3.... no b..*sigh*
The one for WB9ZUV is a 3 also. However, he is planning to get the 3B in the second run, and I will too.
Since Steve isn't going to make a 3C... I think I will get the 3B and call it good.

Thank you Terry, you do those labels very nice!

--... ...--Dale - WC7S in Wy

To: AT_Sprint@yahoogroups.comFrom: wa0itp@...: Wed, 21 Nov 2007 08:56:40 -0600Subject: Re: [AT_Sprint] Free ATS3-B Labels

You bet Dale,

What call letters would you like on them. Are they 3B's?
Happy to help..----------I love this radio stuff!72 73Terry, WAØITPhttp://www.wa0dx.org/wa0itphttp://www.wa0dx.orghttp://www.4sqrp.com/

----- Original Message -----
From: Dale Putnam
To: at_sprint@yahoogroups.com
Sent: Wednesday, November 21, 2007 6:48 AM
Subject: RE: [AT_Sprint] Free ATS3-B Labels

Hi Terry, Hey, I am so happy you mentioned this, I am building one for a fellow, and I have messed mine up, maybe I could talk you out of two?Thank you, --... ...--Dale - WC7S in Wy

To: AT_Sprint@yahoogroups.comFrom: wa0itp@mchsi.comDate: Tue, 20 Nov 2007 21:40:40 -0600Subject: [AT_Sprint] Free ATS3-B Labels

If you'd like one of these for your 3B, just drop me an email and I'll send it to you via USPS. They're completely free, no need for an sase.http://www.wa0dx.org/wa0itp/ats3b.html----------I love this radio stuff!72 73Terry, WAØITPhttp://www.wa0dx.org/wa0itphttp://www.wa0dx.orghttp://www.4sqrp.com/

You keep typing, we keep giving. Download Messenger and join the i’m Initiative now. Join in!

No virus found in this incoming message.Checked by AVG Free Edition. Version: 7.5.503 / Virus Database: 269.16.2/1142 - Release Date: 11/20/2007 5:44 PM

Connect and share in new ways with Windows Live.
http://www.windowslive.com/connect.html?ocid=TXT_TAGLM_Wave2_newways_112007

2238. RE: [AT_Sprint] Portable/Desl Version?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-21 20:38:47 UTC
From: Rob May
Topic: 2235 Message: 2238

Terry, I've thought of doing that. I have an old HW-7 that's been modded to Hades! I've thought about just emptying the case and installing an ATS-3 or 3b (I have both), frequency counter and rotary encoder. Maybe even using the original band switches. I'd have to come up with a scheme to use 3 band switches to switch 6 bands, maybe using the xtal switch to effectively make two sets of 3 band switches. I have so many other projects right now that it'll probably have to wait til summer or so.
Rob
NV5E

To: AT_Sprint@yahoogroups.com
From: wa0itp@...
Date: Wed, 21 Nov 2007 14:02:32 -0600
Subject: [AT_Sprint] Portable/Desl Version?

Has anyone considered pulling together some of Steve's designs into a

slightly larger rig for desk or portable ops?. Perhaps combining the QBSA

and an ATS3 into one case, and switching the band modules?

Just wondering out loud..

I love this radio stuff!

72 73

Terry, WAØITP

http://www.wa0dx.org/wa0itp

http://www.wa0dx.org

http://www.4sqrp.com/

Connect and share in new ways with Windows Live.
http://www.windowslive.com/connect.html?ocid=TXT_TAGLM_Wave2_newways_112007

2239. Re: [AT_Sprint] Portable/Desl Version?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-21 20:53:05 UTC
From: Steven Weber
Topic: 2235 Message: 2239

>Has anyone considered pulling together some of Steve's designs into a
>slightly larger rig for desk or portable ops?. Perhaps combining the QBSA
>and an ATS3 into one case, and switching the band modules?
>
There's only one problem. The transmitter doesn't seem to like long leads
running to the filter. I tried making a relay switch filter module once and
the PA didn't like it at all.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2240. Re: Rotary Encoder for ATS-3

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-21 21:17:36 UTC
From: sm0gns
Topic: 2185 Message: 2240

Hi Steve.

If you can't get in toutch with Anders SM5EFX on the email address found on QRZ.COM, you can try this one: sm5efx@...

This address is the one that is mentioned on the Swedish "ARRL" homepage.

72 de Peder, SM0GNS

2241. oops,

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-21 21:23:22 UTC
From: WA0ITP
Topic: 2241 Message: 2241

Sri,

I meant to send that last note to Dale direct.,

I love this radio stuff!
72 73
Terry, WA?ITP
http://www.wa0dx.org/wa0itp
http://www.wa0dx.org
http://www.4sqrp.com/

2242. Re: [AT_Sprint] Portable/Desk Version?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-21 21:26:27 UTC
From: Kurt Savegnago
Topic: 2235 Message: 2242

--- Steven Weber <kd1jv@...> wrote:

> >Has anyone considered pulling together some of
> Steve's designs into a
> >slightly larger rig for desk or portable ops?.
> Perhaps combining the QBSA
> >and an ATS3 into one case, and switching the band
> modules?
> >
> There's only one problem. The transmitter doesn't
> seem to like long leads
> running to the filter. I tried making a relay switch
> filter module once and
> the PA didn't like it at all.
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com

Hmmmmmm,

Sounds like one would need to mount the whole 3B board upright in a box with a "leetle" door/window to extract the filter manually still.
I expect the control buttons/jacks wouldn't be a problem if they required leads. Integrating it all (with the QBSA) in one enclosure would be the trick.
Perhaps have a storage "rack" inside, easily accessible for the filters so it would not be that much trouble to pull them out and replace.
This could be pulled off with the current hardware.
The only issue would be the layout inside the box and possible fabrication/modification of a stock enclosure of some kind. Could consider different antenna connectors. With extra space in the box, might be able to have a filtered power supply to plug into the wall although that would not be necessary if one had one of those $60.00 12v power supplies that one can dial the voltage and current up to 15V and 3 amps and everything in between.

Kurt KC9LDH

2243. Re: [AT_Sprint] Portable/Desk Version?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-21 21:37:23 UTC
From: Hank Greeb
Topic: 2235 Message: 2243

Hi, Terry:

Your idea would resemble an upgrade of my olde, trusty, Heathkit HW-9, which keeps plugging away. Don't remember how the HW-9 receiver does, but it seems to have a "reasonable" front end. It did "reasonably well" during several Field Daze back in the 80's when I was more heavily into QRP contest mode. The HW-9 probably uses more milliamps on receive, and possibly on transmit. I haven't measured those parameters recently, but I do know it runs nicely for 24 hours on a fully charged large marine battery during Field Day, so it would do okay for portable operation. :).

The HW-9 was built before the direct digital sympathizer was common, so it has a "regular" VFO. Mine covers 80 thru 10, including all the WARC bands. It is a "nice size" for portable operation, and not bad for desk operation. Kinda bulky if I want to set up on a hiking trail, though. :) That's what is intriguing about the ATS... I've lugged my Drake TR-7 or TR-5 out on Field Expeditions, and that's a LOT of weight. The HW-9 is much easier to carry, but it's still much heavier and bulkier than a rig which fits into an Altoids Tin.

If I were designing an "ideal" mid priced desk rig, I'd look very carefully at the circuit of the Elecraft K-2. That rig has lots of "bang for the bux." An "ideal low priced desk rig" is an oxymoron in my way of thinking.

According to a review in QST, the HW-9 with the WARC bandpack cost $290, so it probably would cost >$500 in today's dollars. That's considerably more than $190 in today's dollars, and would make me think hard about a K-2 if I were in that kind of market.

72/73 de n8xx Hg

WA0ITP wrote:

>Has anyone considered pulling together some of Steve's designs into a slightly larger rig for desk or portable ops?. Perhaps combining the QBSA and an ATS3 into one case, and switching the band modules?
>
>Just wondering out loud..
>----------
>I love this radio stuff!
>72 73
>Terry, WA?ITP
>http://www.wa0dx.org/wa0itp
>http://www.wa0dx.org
>http://www.4sqrp.com/
>

2244. RE: [AT_Sprint] Portable/Desk Version?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-21 21:43:14 UTC
From: Dale Putnam
Topic: 2235 Message: 2244

One way to switch the band modules would be to use the old turret tuner from the RCA tv sets. Use the same turret, same contacts, same detent, and box. Replace the existing circuits with the band modules, and you have a band switch. Shouldn't take very long at all. Big problem would be to find the old tv sets.
S'cuse me.. must go into back of garage now. --... ...--Dale - WC7S in Wy

_____
You keep typing, we keep giving. Download Messenger and join the i’m Initiative now.
http://im.live.com/messenger/im/home/?source=TAGLM

2245. Re: Rotary Encoder for ATS-3

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-21 22:04:14 UTC
From: Steve White
Topic: 2185 Message: 2245

Thanks Peder

I just sent an email off to Anders using the Swedish ARRL address...Hope it works...Thanks so much

Steve NU0P

--- In AT_Sprint@yahoogroups.com, "sm0gns" <peder.hp@...> wrote:
>
> Hi Steve.
>
> If you can't get in toutch with Anders SM5EFX on the email address
> found on QRZ.COM, you can try this one: sm5efx@...
>
> This address is the one that is mentioned on the Swedish "ARRL"
> homepage.
>
>
> 72 de Peder, SM0GNS
>

2246. ATS3B - first QSO's

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-22 01:03:43 UTC
From: Fred Maas
Topic: 2246 Message: 2246

With the receiver working well, the crystal filter aligned, it was time to transmit. I used a 9 volt battery that had deteriorated to 7.6 volts according to the ATS3B annunciator. I used my 80 antenna which is the tower, tuner telling me that it was showing the radio 1.1:1. I am in Santa Fe, NM

Tuning down from 3.560 I found N9JF/m calling CQ. He responded and offered 559, clean keying.

Tuning further down to 3.551 found AE5L finishing a QSO and gave him a call. he gave 559 and clean signal, and we chatted for half an hour. He was in Tulsa, OK.

Next, on 3.549 came a half hour chat with AC5P. Mike also said I was 559 and with clean keying. We chatted for some time.

Then WD9FJL in ABQ, NM called me.

After all those QSO's the battery display said 7.4 volts. I have no idea what power out actually was, but the rig was certainly working.

I tuned further down and found many DX stations. I just know they could have heard me, especially HC8N who was very strong, but I could not rattle pile-ups on them. Even on 80 I have worked all over the world QRP, and just know can get them. Will try on the weekend.

This rig is a real blast, thank you Steve for making it available for us kit builders!

72 and happy turkey day.

Fred
W5YA/qrp (op: kt5x)
K2 # 0700
palm paddle # 0070

2247. Re: ATS3B - first QSO's

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-22 03:48:17 UTC
From: radio_kx0r
Topic: 2246 Message: 2247

--- In AT_Sprint@yahoogroups.com, "Fred Maas" <just.one.hill@...>
wrote:

Fred,

I wonder if you had even 1 watt coming out. You should measure that
dead battery with a meter while it's key down. Nice first QSO's!

Carey Fuller
KX0R

>
> With the receiver working well, the crystal filter aligned, it was
> time to transmit. I used a 9 volt battery that had deteriorated to
> 7.6 volts according to the ATS3B annunciator. I used my 80 antenna
> which is the tower, tuner telling me that it was showing the radio
> 1.1:1. I am in Santa Fe, NM
>
> Tuning down from 3.560 I found N9JF/m calling CQ. He responded and
> offered 559, clean keying.
>
> Tuning further down to 3.551 found AE5L finishing a QSO and gave
him a
> call. he gave 559 and clean signal, and we chatted for half an
hour.
> He was in Tulsa, OK.
>
> Next, on 3.549 came a half hour chat with AC5P. Mike also said I
was
> 559 and with clean keying. We chatted for some time.
>
> Then WD9FJL in ABQ, NM called me.
>
> After all those QSO's the battery display said 7.4 volts. I have no
> idea what power out actually was, but the rig was certainly working.
>
> I tuned further down and found many DX stations. I just know they
> could have heard me, especially HC8N who was very strong, but I
could
> not rattle pile-ups on them. Even on 80 I have worked all over the
> world QRP, and just know can get them. Will try on the weekend.
>
> This rig is a real blast, thank you Steve for making it available
for
> us kit builders!
>

> 72 and happy turkey day.
>
> Fred
> W5YA/qrp (op: kt5x)
> K2 # 0700
> palm paddle # 0070
>

2248. Extra 680 ohm resistors?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-22 16:01:15 UTC
From: n0tu/Steve
Topic: 2248 Message: 2248

I came up with 2-extra 680 ohm resistors on my model-BEE? AS far as I can tell they're not missing anywhere else either on main PCB or the modules? Am I missing something or are they just extras? Getting close to the that beloved 'first QSO' ...I can only hope!!!

Happy Holidays Folks

Thanks, Steve/n0tu
http://www.angelfire.com/planet/goatman/

2249. Re: [AT_Sprint] Extra 680 ohm resistors?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-22 17:11:47 UTC
From: Steven Weber
Topic: 2248 Message: 2249

>I came up with 2-extra 680 ohm resistors on my model-BEE? AS far as I
>can tell they're not missing anywhere else either on main PCB or the
>modules? Am I missing something or are they just extras?

Thier extras that some how made it in there.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2250. NR4E kit gone

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-22 20:20:16 UTC
From: Doug Phillips
Topic: 2250 Message: 2250

Guys, my extra kit is off to an new home soon to be installed in an ATS-3.

Doug W7RDP

2251. Re: [AT_Sprint] New build for ATS-3a?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-22 22:05:49 UTC
From: jess gypin
Topic: 2175 Message: 2251
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2252. ATS-3B and QBSA

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-22 23:01:52 UTC
From: radio_kx0r
Topic: 2252 Message: 2252

Happy Thanksgiving All!

I just hooked my AST-3B up to my QBSA, and it works! It counts and updates well on all six bands.

My LO connection is to C28, which is the unused output from the DDS. This is a convenient point. I soldered a 4.7 pf cap to this.

I mounted a micro phone jack about an inch behind the RCA antenna jack. A short piece of small RG-178 coax connects the new LO jack to the 4.7 pf cap. The coax shield is tacked to the grounded end of C28.

My cable to the QBSA is made of RG-178 and is 21 inches long. I used a micro phone jack on the QBSA also. You could use any convenient small coax connectors and cable.

The new battery measuring feature is useful for checking the variable voltage from the QBSA.

It will be fun using this combination at home -

Thanks Steve

72,
Carey Fuller
KX0R

2253. Another BEE almost ALIVE!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-23 15:56:27 UTC
From: Steve Galchutt
Topic: 2253 Message: 2253

Woohoo ...I hear and see the blessed 8s also seeing the 3.9 V at TP1!
....YES, YES ..oh YEES! AND I hear those lovely dits/dahs with a
paddle plugged in! heh.

BUT if I power up and down right away I get an "E" on the LCD? However
if I wait for a couple of minutes then power up I see and hear the 8s
again! Donno what this means? But I can also step through the menu
functions and all is well!

I hope this is all good news?
http://picasaweb.google.com/n0tu.qrp/HBqrpRIGS/photo#5136062459442705522

This might be 'Black Friday' for the shopping world but it's a happy
Friday this camper ...so far! Moving on to more tests ...Stay tuned!

Steve/n0tu

2254. WTB: ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-23 16:17:53 UTC
From: NZ8J
Topic: 2158 Message: 2254

<http://geo.yahoo.com/serv?s=97359714/grpId=18035723/grpspId=1705063108/msgId=2158/stime=1195336070/nc1=4025304/nc2=4836041/nc3=4990217> Still looking for an assembled and working ATS-3B. If you have one for sale please send details to include price shipped via priority mail to zip 45324. Will pay accordingly for a exc working unit.

thanks
Tim
Nz8J

2255. Re: [AT_Sprint] WTB: ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-23 18:09:14 UTC
From: Kurt Savegnago
Topic: 2158 Message: 2255

Hi,

Steve had mentioned the prospect of maybe doing
another kit run of the 3B after the holidays. I think
if folks still want one, they should make it known so
Steve has an idea how many kits to do.
On the other hand, if he has some new ideas, he
might
come up with something else. He did post the 3b was
about as far as he could go with this form factor.

Kurt KC9LDH

--- NZ8J <nz8j@...> wrote:

> Still
> looking for an assembled and working ATS-3B. If you
> have one for sale
> please send details to include price shipped via
> priority mail to zip
> 45324. Will pay accordingly for a exc working unit.
>
> thanks
> Tim
> Nz8J

Slackware user since 1994

2256. Red Plastic for the Display

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-23 20:55:51 UTC
From: radio_kx0r
Topic: 2123 Message: 2256

After getting my QBSA running with my new Bee, I decided to try making a faceplate from the same red acrylic I used to make a filter for the Bee's display. This project turned out pretty well. The QBSA's display looks better, so it's more fun to use.

Making the faceplate was easier than mounting the QBSA in the BLT case. I used a small hacksaw, a file, a square/ruler, drills, and a tap. Fortunately, it was unnecessary to remove the QBSA from the case. I'll eventually replace the screws with black ones.

Photos are posted in the "PHOTOS" section of this site.

2257. Re: ATS-3B and QBSA

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-23 23:15:59 UTC
From: Jim Fraser
Topic: 2252 Message: 2257

Congrats, Carey. I have been ironing out a couple problems with my QBSA. Last night I found a very tiny solder bridge on the rows of pins to the display board. Ths was causing my display to show 30.00MHz instead of 10.00MHz when the Freq Input was connected to the ATS-3B TP1 in calibration mode.

The second problem was that I was getting the same power reading in both forward and reverse. Then when swapping connections as per instructions both power levels were 0. After verifying parts, transformer winding, checking for bridges and swapping in another LM358, I finally saw the problem. The dummy-butt (me) who soldered on the BNC connector for the Antenna soldered both terminals to ground! This from a guy who used to be an electronic tech having built complex prototype boards! Glad I don't do this for a living anymore (now a software engineer). I was then able to calibrate the forward and reverse levels at 3 watts.

I can now put the QBSA into the enclosure I have already prepared, and then get started on the enclosure for the 3B. Now I can enjoy the rest of the weekend!

72 de Jim K6JF

--- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@...>
wrote:
>
> Happy Thanksgiving All!
>
> I just hooked my AST-3B up to my QBSA, and it works! It counts and
> updates well on all six bands.
>
> My LO connection is to C28, which is the unused output from the
DDS.
> This is a convenient point. I soldered a 4.7 pf cap to this.
>
> I mounted a micro phone jack about an inch behind the RCA antenna
> jack. A short piece of small RG-178 coax connects the new LO jack
to
> the 4.7 pf cap. The coax shield is tacked to the grounded end of
C28.
>
> My cable to the QBSA is made of RG-178 and is 21 inches long. I
used a
> micro phone jack on the QBSA also. You could use any convenient
small
> coax connectors and cable.

>
> The new battery measuring feature is useful for checking the
variable
> voltage from the QBSA.
>
> It will be fun using this combination at home -
>
> Thanks Steve
>
> 72,
> Carey Fuller
> KX0R
>

2258. BEE is a'buzzing!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-24 16:35:41 UTC
From: n0tu/Steve
Topic: 2258 Message: 2258

My BEE is ALIVE (and well I think?)!

Just have to share my BEE happy dance! Made my 'first-QSO' on 40m w/K7RJ last night. Band was just starting to go long. CQWW DX-test was getting off to a roaring start! Some where between all the QSB and QRM I managed to squeak in an exchange with Ron before all hell broke loose from CQWW.

Looks like without any L1/L2 tweaking she's doing ~3.5w @11v:
http://picasaweb.google.com/n0tu.qrp/HBqrpRIGS/photo#s5136419212311213218
Haven't checked what's normal yet but this is plenty RF to keep me happy. I've yet to do the CAL and fine tunning steps and build the rest of the modules which should be fun now that I'm over the hump of the basic 'turn-on' stage! (whew!) Not to mention packaging and rethinking my label! This new firm ware is gonna take some time getting used to the new functions and where they live (for me anyway?). Can't wait to get out there with this BEE for a real 'in-the-field' first-QSO. Especially now with 17m this will be FUN to explore!

I'm sure happy with my results thus far! AND Sure glad this group is here! Man it's been a huge boost to be able to monitor, glean insights and gain encouragement from! - A Big Thanks to Steve for (yet another) GREAT design & kit and the rest of you for sharing!

Steve/n0tu

2259. Re: [AT_Sprint] BEE is a'buzzing!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-24 16:58:37 UTC
From: jess gypin
Topic: 2258 Message: 2259
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2260. Re: [AT_Sprint] BEE is a'buzzing!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-24 17:20:39 UTC
From: n0tu/Steve
Topic: 2258 Message: 2260

Hey Jess, Man if you've built all the gear you say you have I wouldn't think twice about diving into the ATS construction! It's really not that bad. Granted it's tiny parts. BUT if you've got patience, maglamp, good lighting, and a small tip for Weller you're in business. The rest is just perseverance! And Steve won't let you fail! Like Elecraft he's there if you get into trouble while trying to debug it.

It's worth it to do it yourself ...really!! Even if I had the time to do another ATS I wouldn't want to deprive you of the pleasure (not to mention the happy dance) that comes from completing an ATS! You CAN do it!

OK, how about if you start it and If you REALLY get into trouble and realize this SMD stuff ain't for you ...give me a call! Steve/n0tu

On Nov 24, 2007 9:58 AM, jess gypin <ontarget1911@...> wrote:
>
>
> Please say that you will build my pre4-A AT-III! I need a builder here in
> Colorado to show me the ropes.!!!
>
> Jess
>
>
>
> On 11/24/07, n0tu/Steve <n0tu.qrp@...> wrote:
> >
> >
> >
> >
> >
> >
> >
> >
> >
> > My BEE is ALIVE (and well I think?)!
> >
> > Just have to share my BEE happy dance! Made my 'first-QSO' on 40m
> > w/K7RJ last night. Band was just starting to go long. CQWW DX-test was
> > getting off to a roaring start! Some where between all the QSB and QRM
> > I managed to squeak in an exchange with Ron before all hell broke
> > loose from CQWW.
> >
> > Looks like without any L1/L2 tweaking she's doing ~3.5w @11v:
> > http://picasaweb.google.com/n0tu.qrp/HBqrpRIGS/photo#s5136419212311213218
> > Haven't checked what's normal yet but this is plenty RF to keep me

> > happy. I've yet to do the CAL and fine tunning steps and build the
> > rest of the modules which should be fun now that I'm over the hump of
> > the basic 'turn-on' stage! (whew!) Not to mention packaging and
> > rethinking my label! This new firm ware is gonna take some time
> > getting used to the new functions and where they live (for me
> > anyway?). Can't wait to get out there with this BEE for a real
> > 'in-the-field' first-QSO. Especially now with 17m this will be FUN to
> > explore!
> >
> > I'm sure happy with my results thus far! AND Sure glad this group is
> > here! Man it's been a huge boost to be able to monitor, glean insights
> > and gain encouragement from! - A Big Thanks to Steve for (yet
> > another) GREAT design & kit and the rest of you for sharing!
> >
> > Steve/n0tu
> >
>
>

2261. RE: [AT_Sprint] BEE is a'buzzing!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-24 19:38:52 UTC
From: Dale Putnam
Topic: 2258 Message: 2261

Congrats there Steve, that is a great feeling isn't it? I bet even Peanut and Rooster helped... well from over there, somewhere a bit afar. --... ...--Dale - WC7S in Wy

To: AT_Sprint@yahoogroups.comFrom: n0tu.qrp@...Date: Sat, 24 Nov 2007 10:20:39 -0700Subject: Re: [AT_Sprint] BEE is a'buzzing!

Hey Jess, Man if you've built all the gear you say you have I wouldn'tthink twice about diving into the ATS construction! It's really notthat bad. Granted it's tiny parts. BUT if you've got patience,maglamp, good lighting, and a small tip for Weller you're in business.The rest is just perseverance! And Steve won't let you fail! LikeElecraft he's there if you get into trouble while trying to debug it.It's worth it to do it yourself ...really!! Even if I had the time todo another ATS I wouldn't want to deprive you of the pleasure (not tomention the happy dance) that comes from completing an ATS! You CAN doit!OK, how about if you start it and If you REALLY get into trouble andrealize this SMD stuff ain't for you ...give me a call! Steve/n0tuOn Nov 24, 2007 9:58 AM, jess gypin <ontarget1911@...> wrote:>>> Please say that you will build my pre4-A AT-III! I need a builder here in> Colorado to show me the ropes.!!!>> Jess>>>> On 11/24/07, n0tu/Steve <n0tu.qrp@...> wrote:> >> >> >> >> >> >> >> >> >> > My BEE is ALIVE (and well I think?)!> >> > Just have to share my BEE happy dance! Made my 'first-QSO' on 40m> > w/K7RJ last night. Band was just starting to go long. CQWW DX-test was> > getting off to a roaring start! Some where between all the QSB and QRM> > I managed to squeak in an exchange with Ron before all hell broke> > loose from CQWW.> >> > Looks like without any L1/L2 tweaking she's doing ~3.5w @11v:> > http://picasaweb.google.com/n0tu.qrp/HBqrpRIGS/photo#s5136419212311213218> > Haven't checked what's normal yet but this is plenty RF to keep me> > happy. I've yet to do the CAL and fine tunning steps and build the> > rest of the modules which should be fun now that I'm over the hump of> > the basic 'turn-on' stage! (whew!) Not to mention packaging and> > rethinking my label! This new firm ware is gonna take some time> > getting used to the new functions and where they live (for me> > anyway?). Can't wait to get out there with this BEE for a real> > 'in-the-field' first-QSO. Especially now with 17m this will be FUN to> > explore!> >> > I'm sure happy with my results thus far! AND Sure glad this group is> > here! Man it's been a huge boost to be able to monitor, glean insights> > and gain encouragement from! - A Big Thanks to Steve for (yet> > another) GREAT design & kit and the rest of you for sharing!> >> > Steve/n0tu> >>>

You keep typing, we keep giving. Download Messenger and join the i’m Initiative now.
http://im.live.com/messenger/im/home/?source=TAGLM

2262. Re: BEE is a'buzzing!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-24 21:35:36 UTC
From: eplerkeppler
Topic: 2258 Message: 2262

Congrats on the BEE Steve!

And thanks for sharing the pictures.

You always seem to have good shots even close ups on your bench are
ultra crisp. May I ask what camera you are using? Did you do the
bench shots with the camera on a tri-pod or just free hand?

-- Charles

--- In AT_Sprint@yahoogroups.com, "n0tu/Steve" <n0tu.qrp@...> wrote:
>
> My BEE is ALIVE (and well I think?)!
>
> Just have to share my BEE happy dance! Made my 'first-QSO' on 40m
> w/K7RJ last night. Band was just starting to go long. CQWW DX-test was
> getting off to a roaring start! Some where between all the QSB and QRM
> I managed to squeak in an exchange with Ron before all hell broke
> loose from CQWW.
>
> Looks like without any L1/L2 tweaking she's doing ~3.5w @11v:
>
http://picasaweb.google.com/n0tu.qrp/HBqrpRIGS/photo#s5136419212311213218
> Haven't checked what's normal yet but this is plenty RF to keep me
> happy. I've yet to do the CAL and fine tunning steps and build the
> rest of the modules which should be fun now that I'm over the hump of
> the basic 'turn-on' stage! (whew!) Not to mention packaging and
> rethinking my label! This new firm ware is gonna take some time
> getting used to the new functions and where they live (for me
> anyway?). Can't wait to get out there with this BEE for a real
> 'in-the-field' first-QSO. Especially now with 17m this will be FUN to
> explore!
>
> I'm sure happy with my results thus far! AND Sure glad this group is
> here! Man it's been a huge boost to be able to monitor, glean insights
> and gain encouragement from! - A Big Thanks to Steve for (yet
> another) GREAT design & kit and the rest of you for sharing!
>
> Steve/n0tu
>

2263. ATS3B Trial by CQ WW (or, 60 minutes of DX)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-24 23:40:56 UTC
From: Fred Maas
Topic: 2263 Message: 2263

IT WORKS

Since I am not confident that it is tuned up adequately (no output meter sensitive enough for the job) I have been using a 9 volt battery. It started at 7.5 volts (that would be about 1.5 watts output), and ended about 6.7 volts, likely under one watt.

call sign W5YA (op: kt5x)

Put the radio for the first time on 15 mtrs for 30 minutes and worked:

ZL4PW
AH7C
KH7Y
KH6YR
KH6MB
KH6LC
VE3EY
KH7X
HC8N
KL7WV
KG6DX
E51A

Then, after running about four miles on a perfect afternoon in the light snow, about 30 degrees, couldn't have been nicer...

tried the radio for the first time on 20 mtrs for about 30 minutes and worked...

JF2QNM
JI1RXQ
JH8SLS
KH6YR
PS2T
XE1MM
JA1BPA
VE6EX
JA1JKG
JN2AMD
JH3AIV
JA3AIU
JA3YBK
JA2ZJW
VE7SV
JF1SQC

Most of these were one call. Most of them were solid S-9 here in New Mexico.

tuning the rcvr with the buttons is soon comfortable enough. It is quite resistant to overload and IMD, had no particular problems,

Must rig up a current limited supply source so I can stay on a while!!!

72, FD - kt5x

2264. RE: [AT_Sprint] BEE is a'buzzing!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-25 01:25:45 UTC
From: Dale Putnam
Topic: 2258 Message: 2264

Hi Jess,
I am in Cheyenne, if you want, I could put your A together for you. Just happy to do it. I'm building one for me, and another fellow, so a third is no problem at all.--...
...--Dale - WC7S in Wy

To: AT_Sprint@yahoogroups.comFrom: ontarget1911@...: Sat, 24 Nov 2007 09:58:37 -0700Subject: Re: [AT_Sprint] BEE is a'buzzing!

Please say that you will build my pre4-A AT-III! I need a builder here in Colorado to show me the ropes.!!!

Jess
On 11/24/07, n0tu/Steve <n0tu.qrp@...> wrote:

My BEE is ALIVE (and well I think?)!Just have to share my BEE happy dance! Made my 'first-QSO' on 40mw/K7RJ last night. Band was just starting to go long. CQWW DX-test wasgetting off to a roaring start! Some where between all the QSB and QRM I managed to squeak in an exchange with Ron before all hell brokeloose from CQWW.Looks like without any L1/L2 tweaking she's doing ~3.5w @11v:http://picasaweb.google.com/n0tu.qrp/HBqrpRIGS/photo#s5136419212311213218Haven't checked what's normal yet but this is plenty RF to keep mehappy. I've yet to do the CAL and fine tunning steps and build the rest of the modules which should be fun now that I'm over the hump ofthe basic 'turn-on' stage! (whew!) Not to mention packaging andrethinking my label! This new firm ware is gonna take some timegetting used to the new functions and where they live (for meanyway?). Can't wait to get out there with this BEE for a real'in-the-field' first-QSO. Especially now with 17m this will be FUN toexplore! I'm sure happy with my results thus far! AND Sure glad this group ishere! Man it's been a huge boost to be able to monitor, glean insightsand gain encouragement from! - A Big Thanks to Steve for (yet another) GREAT design & kit and the rest of you for sharing!Steve/n0tu

_____
Share life as it happens with the new Windows Live.Download today it's FREE!
http://www.windowslive.com/share.html?ocid=TXT_TAGLM_Wave2_sharelife_112007

2265. RE: [AT_Sprint] BEE is a'buzzing!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-25 01:25:44 UTC
From: Dale Putnam
Topic: 2258 Message: 2265

Hi Jess,
I am in Cheyenne, if you want, I could put your A together for you. Just happy to do it. I'm building one for me, and another fellow, so a third is no problem at all.--...
...--Dale - WC7S in Wy

To: AT_Sprint@yahoogroups.comFrom: ontarget1911@...: Sat, 24 Nov 2007 09:58:37 -0700Subject: Re: [AT_Sprint] BEE is a'buzzing!

Please say that you will build my pre4-A AT-III! I need a builder here in Colorado to show me the ropes.!!!

Jess
On 11/24/07, n0tu/Steve <n0tu.qrp@...> wrote:

My BEE is ALIVE (and well I think?)!Just have to share my BEE happy dance! Made my 'first-QSO' on 40mw/K7RJ last night. Band was just starting to go long. CQWW DX-test wasgetting off to a roaring start! Some where between all the QSB and QRM I managed to squeak in an exchange with Ron before all hell brokeloose from CQWW.Looks like without any L1/L2 tweaking she's doing ~3.5w @11v:http://picasaweb.google.com/n0tu.qrp/HBqrpRIGS/photo#s5136419212311213218Haven't checked what's normal yet but this is plenty RF to keep mehappy. I've yet to do the CAL and fine tunning steps and build the rest of the modules which should be fun now that I'm over the hump ofthe basic 'turn-on' stage! (whew!) Not to mention packaging andrethinking my label! This new firm ware is gonna take some timegetting used to the new functions and where they live (for meanyway?). Can't wait to get out there with this BEE for a real'in-the-field' first-QSO. Especially now with 17m this will be FUN toexplore! I'm sure happy with my results thus far! AND Sure glad this group ishere! Man it's been a huge boost to be able to monitor, glean insightsand gain encouragement from! - A Big Thanks to Steve for (yet another) GREAT design & kit and the rest of you for sharing!Steve/n0tu

_____
Your smile counts. The more smiles you share, the more we donate. Join in.
www.windowslive.com/smile?ocid=TXT_TAGLM_Wave2_oprsmilewlhmtagline

2266. Re: ATS3B Trial by CQ WW (or, 60 minutes of DX)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-25 01:54:28 UTC
From: radio_kx0r
Topic: 2263 Message: 2266

--- In AT_Sprint@yahoogroups.com, "Fred Maas" <just.one.hill@...>
wrote:

Yes, Fred, the radio works, but the poor little thing is almost
starving. It works even better with a little more voltage and
current....

My first 5 contacts on 15M today were:

ED8A 33
ZF1A 8
PJ2T 9
ZS4TX 38
HI3A 8

These were with either a loop antenna or a small Vee, both at 35 feet.
That's a nice way to start out on 15.

I agree with Fred about the minimal overload. KW stations right in
the passband do take over, but I can't tell they're on the air a khz
away, unless they have clicks. Local QRO contester K0RF is a few
miles away, and he does some serious damage sometimes - but on the
Bee, he's only a problem within 1 or 2 khz.

72,

Carey Fuller
KX0R

>
> IT WORKS
>
> Since I am not confident that it is tuned up adequately (no output
> meter sensitive enough for the job) I have been using a 9 volt
> battery. It started at 7.5 volts (that would be about 1.5 watts
> output), and ended about 6.7 volts, likely under one watt.
>
> call sign W5YA (op: kt5x)
>
> Put the radio for the first time on 15 mtrs for 30 minutes and
worked:
>
> ZL4PW
> AH7C
> KH7Y
> KH6YR
> KH6MB

> KH6LC
> VE3EY
> KH7X
> HC8N
> KL7WV
> KG6DX
> E51A
>
> Then, after running about four miles on a perfect afternoon in the
> light snow, about 30 degrees, couldn't have been nicer...
>
> tried the radio for the first time on 20 mtrs for about 30 minutes
and worked...
>
> JF2QNM
> JI1RXQ
> JH8SLS
> KH6YR
> PS2T
> XE1MM
> JA1BPA
> VE6EX
> JA1JKG
> JN2AMD
> JH3AIV
> JA3AIU
> JA3YBK
> JA2ZJW
> VE7SV
> JF1SQC
>
> Most of these were one call. Most of them were solid S-9 here in
New Mexico.
>
> tuning the rcvr with the buttons is soon comfortable enough. It is
> quite resistant to overload and IMD, had no particular problems,
>
> Must rig up a current limited supply source so I can stay on a
while!!!
>
> 72, FD - kt5x
>

2267. Re: [AT_Sprint] Re: ATS3B Trial by CQ WW (or, 60 minutes of DX)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-25 04:04:21 UTC
From: Fred Maas
Topic: 2263 Message: 2267

Built the voltage limiter with the parts you sent me, thanks! I cut
the 13.5 volt supply to 10.67 volts and now running perhaps 3 watts.

I don't have the 40 mtr module built yet, so playing on 80 mtr. I am
having no trouble copying Europe (from new Mexico) in the 3B.

And i have worked KH7B, CN2FB, VE7GL, ZF1A, KH7X ... so far ;-)

72, FD KT5X (W5YA)

On Nov 24, 2007 6:54 PM, radio_kx0r <careyfuller@...> wrote:
>
>
>
>
>
>
> --- In AT_Sprint@yahoogroups.com, "Fred Maas" <just.one.hill@...>
> wrote:
>
> Yes, Fred, the radio works, but the poor little thing is almost
> starving. It works even better with a little more voltage and
> current....
>
> My first 5 contacts on 15M today were:
>
> ED8A 33
> ZF1A 8
> PJ2T 9
> ZS4TX 38
> HI3A 8
>
> These were with either a loop antenna or a small Vee, both at 35 feet.
> That's a nice way to start out on 15.
>
> I agree with Fred about the minimal overload. KW stations right in
> the passband do take over, but I can't tell they're on the air a khz
> away, unless they have clicks. Local QRO contester K0RF is a few
> miles away, and he does some serious damage sometimes - but on the
> Bee, he's only a problem within 1 or 2 khz.
>
> 72,
>
> Carey Fuller
> KX0R
>

>
>
> >
> > IT WORKS
> >
> > Since I am not confident that it is tuned up adequately (no output
> > meter sensitive enough for the job) I have been using a 9 volt
> > battery. It started at 7.5 volts (that would be about 1.5 watts
> > output), and ended about 6.7 volts, likely under one watt.
> >
> > call sign W5YA (op: kt5x)
> >
> > Put the radio for the first time on 15 mtrs for 30 minutes and
> worked:
> >
> > ZL4PW
> > AH7C
> > KH7Y
> > KH6YR
> > KH6MB
> > KH6LC
> > VE3EY
> > KH7X
> > HC8N
> > KL7WV
> > KG6DX
> > E51A
> >
> > Then, after running about four miles on a perfect afternoon in the
> > light snow, about 30 degrees, couldn't have been nicer...
> >
> > tried the radio for the first time on 20 mtrs for about 30 minutes
> and worked...
> >
> > JF2QNM
> > JI1RXQ
> > JH8SLS
> > KH6YR
> > PS2T
> > XE1MM
> > JA1BPA
> > VE6EX
> > JA1JKG
> > JN2AMD
> > JH3AIV
> > JA3AIU
> > JA3YBK
> > JA2ZJW
> > VE7SV
> > JF1SQC

> >
> > Most of these were one call. Most of them were solid S-9 here in
> New Mexico.
> >
> > tuning the rcvr with the buttons is soon comfortable enough. It is
> > quite resistant to overload and IMD, had no particular problems,
> >
> > Must rig up a current limited supply source so I can stay on a
> while!!!
> >
> > 72, FD - kt5x
> >
>
>

2268. 9V Battery

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-25 22:11:18 UTC
From: kc7fys
Topic: 2268 Message: 2268

http://www.flickr.com./photos/anachrocomputer/2057674544/
Interesting photo of the innards of a 9V battery.
KC7FYS

2269. Re: [AT_Sprint] 9V Battery

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-25 22:41:33 UTC
From: Alan Fryer
Topic: 2268 Message: 2269

Strange... the terminals are not lined up like a normal 9V battery...

----- Original Message -----
From: kc7fys
To: AT_Sprint@yahoogroups.com
Sent: Sunday, November 25, 2007 5:11 PM
Subject: [AT_Sprint] 9V Battery

http://www.flickr.com./photos/anachrocomputer/2057674544/
Interesting photo of the innards of a 9V battery.
KC7FYS

2270. Re: [AT_Sprint] Another BEE almost ALIVE!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-25 23:08:31 UTC
From: Full Some
Topic: 2253 Message: 2270

Steve

Did you add the extra 22K chip resistor across C58?

Steve Galchutt <n0tu.qrp@...> wrote: Woohoo ...I hear and see the blessed 8s also seeing the 3.9 V at TP1!
....YES, YES ..oh YEES! AND I hear those lovely dits/dahs with a paddle plugged in! heh.

BUT if I power up and down right away I get an "E" on the LCD? However if I wait for a couple of minutes then power up I see and hear the 8s again! Donno what this means? But I can also step through the menu functions and all is well!

I hope this is all good news?
http://picasaweb.google.com/n0tu.qrp/HBqrpRIGS/photo#5136062459442705522

This might be 'Black Friday' for the shopping world but it's a happy Friday this camper ...so far! Moving on to more tests ...Stay tuned!

Steve/n0tu

Be a better sports nut! Let your teams follow you with Yahoo Mobile. Try it now.

2271. batteries for ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-25 23:47:52 UTC
From: Fred Maas
Topic: 2271 Message: 2271

Contemplating power source for the ATS3B ... in its intended service, which is to carry while ultra-running in the Rockies. Most of my runs are from two to six hours at altitudes from 9,000 to 14,000 ft.

9 volt alkaloid

E-flite LiPoly is 11.1 volts, 860 mAh, 2.4 ounces, $40, and needs a special charger, careful handling

another LiPoly was 2100 mAh, 6 ounces, $70, etc.

but here http://www.nimhbattery.com/9v-ultralife-batteries-9-volt.htm

is a 9 volt, 1200 mAh, 1 ounce, for $5.

Has anyone tried these? Do they hold up under the relatively high drain moments transmitting?

Does anyone have better idea for small and light???

72, Fred kt5x

2272. Re: batteries for ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-26 00:37:07 UTC
From: n8xx@arrl.org
Topic: 2271 Message: 2272

I'd say this all depends on how much you value weight, and how much you'd value the fact that the fact that the LiPO and the NiMH cells are rechargeable.

It wouldn't cost you much to try the non rechargeable ones, just to see how they hold up. They're considerably lighter than the rechargeable ones.

72/73 de n8xx Hg

p.s. Running @ 14000 feet is beyond my capability - even when I lived in Denver for 5 years. Congrats on your athletic ability! Now a daze it takes me 3 or so daze to get used to 9000 ft altitude in Breckenridge where we like to go for vacation.

---------- Original Message ----------
Subject: [AT_Sprint] batteries for ATS3B
From: "Fred Maas" <just.one.hill@...>
Date: Sun, November 25, 2007 6:47 pm
To: AT_Sprint@yahoogroups.com

Contemplating power source for the ATS3B ... in its intended service, which is to carry while ultra-running in the Rockies. Most of my runs are from two to six hours at altitudes from 9,000 to 14,000 ft.

9 volt alkaloid

E-flite LiPoly is 11.1 volts, 860 mAh, 2.4 ounces, $40, and needs a special charger, careful handling

another LiPoly was 2100 mAh, 6 ounces, $70, etc.

but here http://www.nimhbattery.com/9v-ultralife-batteries-9-volt.htm

is a 9 volt, 1200 mAh, 1 ounce, for $5.

Has anyone tried these? Do they hold up under the relatively high drain moments transmitting?

Does anyone have better idea for small and light???

72, Fred kt5x

2273. Re: Another BEE almost ALIVE!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-26 01:22:34 UTC
From: Dave
Topic: 2253 Message: 2273

> 22K chip resistor across C58

... as described here:

http://groups.yahoo.com/group/AT_Sprint/message/1585

Dave, WA3OFF

2274. Need 3B drilling template

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-26 02:29:49 UTC
From: Rob May
Topic: 2274 Message: 2274

My ATS-3B CD is blank. I downloaded the manual from the files section, but there doesn't seem to be a copy of the bitmap of the drilling template. Could someone email it to me or post it to the files section? Thanks.
Rob
NV5E

_____
Put your friends on the big screen with Windows Vista® + Windows Live™.
http://www.microsoft.com/windows/shop/specialoffers.mspx?ocid=TXT_TAGLM_CPC_MediaCtr_bigscreen_102007

2275. Re: ATS3B Trial by CQ WW (or, 60 minutes of DX)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-26 02:39:57 UTC
From: radio_kx0r
Topic: 2263 Message: 2275

-
Reading about someone else's DX can be boring - so you can skip this if you hate DXing. Fred and I both worked a bunch of DX with our BEEs this weekend. Now Fred can smell DX, so I'm not surprised...

The CQWW was a nice test of the ATS-3B. The BEE's not designed to bust pileups, but it can be heard in some amazing places, if you can get the other op to listen.

My BEE made dozens of DX contacts on 80, 40, 20, and 15 meters. I only tried 80 for a few minutes, and I got CN2FB (33), KL7WV (1), and VE7GL (3). On 40 the DX was piled up, but I managed to work LU4MHQ (13), EF8M (33), EA8/OH4NL (33), KH6MB and KH6YR (31), as well as a bunch of Caribbean and Canadian stations.

On 20 and 15 the QRP DXing was amazing: ZS4TX (38), ED8A on both bands (33), OA4SS (10), OF9L (15), 6W1RW (35), 3X5A (35), LT1F (13), HC8N on both bands (10), several Hawaiians (31), and lots of Caribbeans and even a few North Americans. With no sunspots, 15 was light and thin, so it was cool to work thousands of miles with those three little 2n7000's. I used a pair of fullwave loops cut for 20M on 15 and 20; yes, I have a tuner. The wires here are at 35 feet up.

Of course I tried to work numerous stations that never knew I was there. The band conditions were so light (long) that it was hard to hear stations calling the DX - so they sounded in the clear when there were lots of people calling. I could hear the QRO guys on scatter, though, because the BEE's receiver is excellent. You can beat Steve's MDS specs if you try.

The rig will do a lot af amazing things if you let it. It is a like a BEE the way it works.

More fun ahead...

72/73

Carey Fuller
KX0R

-- In AT_Sprint@yahoogroups.com, "Fred Maas" <just.one.hill@...> wrote:
>
> Built the voltage limiter with the parts you sent me, thanks! I cut
> the 13.5 volt supply to 10.67 volts and now running perhaps 3 watts.
>
> I don't have the 40 mtr module built yet, so playing on 80 mtr. I am
> having no trouble copying Europe (from new Mexico) in the 3B.

>
> And i have worked KH7B, CN2FB, VE7GL, ZF1A, KH7X ... so far ;-)
>
> 72, FD KT5X (W5YA)
>
>

2276. Re: [AT_Sprint] Need 3B drilling template

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-26 04:31:41 UTC
From: Mark Langenfeld
Topic: 2274 Message: 2276

Rob:

Let me know if you still need this template.

Got the '3B kit, but have yet to tackle it (and it may be awhile). Please let me know how your build goes.

Mark -- WA9ETW

----- Original Message -----
From: Rob May
To: AT_Sprint@yahoogroups.com
Sent: Sunday, November 25, 2007 8:29 PM
Subject: [AT_Sprint] Need 3B drilling template

My ATS-3B CD is blank. I downloaded the manual from the files section, but there doesn't seem to be a copy of the bitmap of the drilling template. Could someone email it to me or post it to the files section? Thanks.
Rob
NV5E

Get the power of Windows + Web with the new Windows Live. Power up!

2277. Re: [AT_Sprint] Need 3B drilling template

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-26 05:26:11 UTC
From: Steven Weber
Topic: 2274 Message: 2277

>My ATS-3B CD is blank.

For some reason, some CD drives don't see the file folder on the CD. If
you have another PC or can visit a freind, try that and you might find it
isn't blank.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2278. Re: Need 3B drilling template

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-26 06:44:17 UTC
From: radio_kx0r
Topic: 2274 Message: 2278

--- In AT_Sprint@yahoogroups.com, Rob May <roblitespeed@...> wrote:

Rob,

I just uploaded that image file for the template to the FILES section here. I was able to open it from there. It seems like a large file for what it is. I didn't alter or compress it or whatever.

It's called ATS3B_bez_nocolor

Be sure to print it using Steve's instructions in the manual if you want the correct scaling.

Carey Fuller
KX0R
>
> My ATS-3B CD is blank. I downloaded the manual from the files section, but there doesn't seem to be a copy of the bitmap of the drilling template. Could someone email it to me or post it to the files section? Thanks.
> Rob
> NV5E
>
> _____
> Put your friends on the big screen with Windows Vista® + Windows Live□.
> http://www.microsoft.com/windows/shop/specialoffers.mspx?ocid=TXT_TAGLM_CPC_MediaCtr_bigscreen_102007
>

2279. Re: [AT_Sprint] batteries for ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-26 11:33:32 UTC
From: Bill Noyce
Topic: 2271 Message: 2279

I've been disappointed with the 9v Lithium disposable batteries for transmitting. Their main design goal appears to be shelf life, so they last a long time in low-current applications. Google found a datasheet here:
http://www.ultralifebatteries.com/documents/techsheets/UBI-5180_U9VLX.pdf
that says "max discharge 120 mA continuous, pulse capability up to 400 mA, depending"
There's also a graph of voltage vs elapsed amp-hours for a 60-ohm load. The battery immediately drops to about 7.7 volts, and drops below 7 volts before 0.8 Ah.

For lightweight disposable batteries that work in the cold, try lithium AAA's -- they do support high current applications.
-- Bill, AB1AV

On 11/25/07, Fred Maas <just.one.hill@...> wrote:
>
>
>
>
>
>
> Contemplating power source for the ATS3B ... in its intended service,
> which is to carry while ultra-running in the Rockies. Most of my runs
> are from two to six hours at altitudes from 9,000 to 14,000 ft.
>
> 9 volt alkaloid
>
> E-flite LiPoly is 11.1 volts, 860 mAh, 2.4 ounces, $40, and needs a
> special charger, careful handling
>
> another LiPoly was 2100 mAh, 6 ounces, $70, etc.
>
> but here http://www.nimhbattery.com/9v-ultralife-batteries-9-volt.htm
>
> is a 9 volt, 1200 mAh, 1 ounce, for $5.
>
> Has anyone tried these? Do they hold up under the relatively high
> drain moments transmitting?
>
> Does anyone have better idea for small and light???
>
> 72, Fred kt5x
>

2280. RE: [AT_Sprint] Need 3B drilling template

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-26 13:17:22 UTC
From: Rob May
Topic: 2274 Message: 2280

Hey Mark! How's it going. The build went easily enough, no surprises. I've had it together for a month or so but I had a little medical emergency so I'm just getting to putting it in the case. I found that I could resize the page in the PDF manual and print it the right size so I'm good to go.
Hope the '3A is still working good for you. I think you'll enjoy building the 3B. Best wishes Mark for a happy holiday season.
73,
Rob
NV5E

To: AT_Sprint@yahoogroups.com
From: mlangen@...
Date: Sun, 25 Nov 2007 22:31:41 -0600
Subject: Re: [AT_Sprint] Need 3B drilling template

Rob:

Let me know if you still need this
template.

Got the '3B kit, but have yet to tackle it (and it
may be awhile). Please let me know how your build goes.

Mark -- WA9ETW

----- Original Message -----
From:
Rob
May
To: AT_Sprint@yahoogroups.com
Sent: Sunday, November 25, 2007 8:29
PM
Subject: [AT_Sprint] Need 3B drilling
template

My ATS-3B CD is blank. I downloaded the manual from the files
section, but there doesn't seem to be a copy of the bitmap of the drilling
template. Could someone email it to me or post it to the files
section? Thanks.
Rob
NV5E

Get the power of Windows + Web with the new Windows Live. Power up!

_____
Connect and share in new ways with Windows Live.
http://www.windowslive.com/connect.html?ocid=TXT_TAGLM_Wave2_newways_112007

2281. RE: [AT_Sprint] Need 3B drilling template

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-26 13:20:20 UTC
From: Rob May
Topic: 2274 Message: 2281

You are right Steve, it came up fine on my wife's computer. Should have it mounted in the tin today.
73,
Rob
NV5E

To: AT_Sprint@yahoogroups.com
From: kd1jv@...
Date: Mon, 26 Nov 2007 00:26:11 -0500
Subject: Re: [AT_Sprint] Need 3B drilling template

>My ATS-3B CD is blank.

For some reason, some CD drives don't see the file folder on the CD. If

you have another PC or can visit a freind, try that and you might find it

isn't blank.

72,

Steve, KD1JV

"Melt Solder"

White Mountains of New Hampshire

http://kd1jv.qrpradio.com

Connect and share in new ways with Windows Live.
http://www.windowslive.com/connect.html?ocid=TXT_TAGLM_Wave2_newways_112007

2282. RE: [AT_Sprint] Need 3B drilling template

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-26 13:24:24 UTC
From: Rob May
Topic: 2274 Message: 2282

Oops, that one was supposed to be private, move along, nothing to see here! ;-)
Rob

To: at_sprint@yahoogroups.com
From: roblitespeed@...
Date: Mon, 26 Nov 2007 07:17:22 -0600
Subject: RE: [AT_Sprint] Need 3B drilling template

Hey Mark! How's it going. The build went easily enough, no surprises. I've had it together for a month or so but I had a little medical emergency so I'm just getting to putting it in the case. I found that I could resize the page in the PDF manual and print it the right size so I'm good to go.
Hope the '3A is still working good for you. I think you'll enjoy building the 3B. Best wishes Mark for a happy holiday season.
73,
Rob
NV5E

To: AT_Sprint@yahoogroups.com
From: mlangen@...
Date: Sun, 25 Nov 2007 22:31:41 -0600
Subject: Re: [AT_Sprint] Need 3B drilling template

Rob:

Let me know if you still need this
template.

Got the '3B kit, but have yet to tackle it (and it
may be awhile). Please let me know how your build goes.

Mark -- WA9ETW

----- Original Message -----
From:
Rob
May
To: AT_Sprint@yahoogroups.com
Sent: Sunday, November 25, 2007 8:29
PM
Subject: [AT_Sprint] Need 3B drilling
template

My ATS-3B CD is blank. I downloaded the manual from the files
section, but there doesn't seem to be a copy of the bitmap of the drilling
template. Could someone email it to me or post it to the files
section? Thanks.

Rob
NV5E

Get the power of Windows + Web with the new Windows Live. Power up!

Connect and share in new ways with Windows Live. Connect now!

_____
Connect and share in new ways with Windows Live.
http://www.windowslive.com/connect.html?ocid=TXT_TAGLM_Wave2_newways_112007

2283. RE: [AT_Sprint] Need 3B drilling template

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-26 14:57:17 UTC
From: Mark Langenfeld
Topic: 2274 Message: 2283

Rob:

Glad to hear all is well (with both you and the new rig).

I have been busy as a one-legged man in a kicking contest trying to clear the path for a planned semi-retirement January 31. Consequently, I have been all tied up in knots and unable to do much hamming or building. But the end is in sight.

The local SMT Elmers are hyping the Cash Olson hot air technique, so that is likely the route I will ultimately go with the '3B. Just got new glasses, so I'm hopefull I'll be able to keep track of all the components.

Meanwhile, the '3A continues to perform very well. I get a lot of pleasure out of that little rig. Thanks again for your help with it.

All the best for the holidays and New Year.

73,

Mark -- WA9ETW

>
> Hey Mark! How's it going. The build went easily enough, no surprises. I've had it together for a month or so but I had a little medical emergency so I'm just getting to putting it in the case. I found that I could resize the page in the PDF manual and print it the right size so I'm good to go.Hope the '3A is still working good for you. I think you'll enjoy building the 3B. Best wishes Mark for a happy holiday season.73,RobNV5ETo: AT_Sprint@yahoogroups.comFrom: mlangen@...: Sun, 25 Nov 2007 22:31:41 -0600Subject: Re: [AT_Sprint] Need 3B drilling template
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>

--
CoreComm Webmail.
http://home.core.com

2284. RE: [AT_Sprint] Need 3B drilling template

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-26 15:02:33 UTC
From: Mark Langenfeld
Topic: 2274 Message: 2284

Ooops! Another private message sneaks through!

Apologies to all.

Mark -- WA9ETW
--
CoreComm Webmail.
http://home.core.com

2285. RE:[AT_Sprint] Nice design, JN1GLB. (See photo section)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-26 18:26:18 UTC
From: n0tu/Steve
Topic: 2113 Message: 2285

Makoto-san,

What are the values (schematic?) for your very FB compact ATS- ATU?

Toriod? T50-2?? Number of turns? Taps? or values?

Thank you, Steve/n0tu

> Black device is Antenna Tuner.
> The circuit is about same as SLT(see qrpkits.com).
>
> Chocolate ALTOIDS is not so bad.
>
> Makoto / JN1GLB
>
> ----- Original Message ----
> From: kc7fys <kc7fys@...>
> To: AT_Sprint@yahoogroups.com
> Sent: Wednesday, November 14, 2007 1:19:48 PM
> Subject: [AT_Sprint] Nice design, JN1GLB. (See photo section)
>
> FB rig, JN1GLB,
> May I ask: What is the black device to the left of your ATS3B? Also,
> your 6-単3& #24418; cell pack--that's new to me.
> Also, I have never tried the chocolate Altoids.
> Jonathan 7J1AWL
>
>
>
>
>
> _____
> Get easy, one-click access to your favorites.
> Make Yahoo! your homepage.
> http://www.yahoo.com/r/hs
>

2286. ATS3B "Check and Calibration" Question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-26 22:09:47 UTC
From: mikee30h
Topic: 2286 Message: 2286

I'm moving along on the 3B build. It was sweet to hear the "8" in the headphones after chasing down a couple soldering errors.

Now, however, In doing the check and calibration steps called for in the instructions (just after the filter board assembly), I found that when I put a voltmeter between ground and the
drain on Q4, the voltage is not slowly decaying to zero after I stop sending a series of "dahs".
The instructions indicate that the voltage should go slowly to zero.

So, I guess there is a problem in the keying circuit. Suggestions on where to look for the problem?

Thanks.

Mike NR7F

2287. Re: [AT_Sprint] ATS3B "Check and Calibration" Question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-26 23:22:16 UTC
From: james.rushforth@tesco.net
Topic: 2286 Message: 2287

Hi
When I came to test mine I had same problem. However when I did the test on Q6 the test worked. I assumed thre was a typeo error in the information that Q4 should have read Q6. I have now completed the rig and it works superbly, with no problem with the CW at all.

Jim

G3ZPD

---- mikee30h <nr7fcall@...> wrote:
> I'm moving along on the 3B build. It was sweet to hear the "8" in the headphones after
> chasing down a couple soldering errors.
>
> Now, however, In doing the check and calibration steps called for in the instructions (just
> after the filter board assembly), I found that when I put a voltmeter between ground and the
> drain on Q4, the voltage is not slowly decaying to zero after I stop sending a series of "dahs".
> The instructions indicate that the voltage should go slowly to zero.
>
> So, I guess there is a problem in the keying circuit. Suggestions on where to look for the
> problem?
>
> Thanks.
>
> Mike NR7F
>

2288. Re: [AT_Sprint] ATS3B "Check and Calibration" Question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-26 23:30:14 UTC
From: james.rushforth@tesco.net
Topic: 2286 Message: 2288

Hi again Mike

Think I should have said Q5 not Q6 - anyway, even if the test didn't work on Q4, the rig still work FB on CW.

Jim

G3ZPD

---- mikee30h <nr7fcall@...> wrote:
> I'm moving along on the 3B build. It was sweet to hear the "8" in the headphones after
> chasing down a couple soldering errors.
>
> Now, however, In doing the check and calibration steps called for in the instructions (just
> after the filter board assembly), I found that when I put a voltmeter between ground and the
> drain on Q4, the voltage is not slowly decaying to zero after I stop sending a series of "dahs".
> The instructions indicate that the voltage should go slowly to zero.
>
> So, I guess there is a problem in the keying circuit. Suggestions on where to look for the
> problem?
>
> Thanks.
>
> Mike NR7F
>

2289. Re: ATS3B "Check and Calibration" Question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-27 00:36:25 UTC
From: radio_kx0r
Topic: 2286 Message: 2289

--- In AT_Sprint@yahoogroups.com, <james.rushforth@...> wrote:
Jim,

The test for the drain voltage, which should decay when you stop keying, is done on Q6, the mosfet with "2955" on it. This is a fairly large component with a large tab. The part is Q6 on the board designator, and it's Q6 on the REVISED drawing found in the FILES section here.

The part is Q5 on the earlier drawing with errors in the designators. The text in the manual refers to Q4, which was correct for the "A" version.

You really want to check the drain of Q6!

72

Carey Fuller
KX0R

> Hi again Mike
>
> Think I should have said Q5 not Q6 - anyway, even if the test didn't work on Q4, the rig still work FB on CW.
>
> Jim
>
> G3ZPD
>
>
> ---- mikee30h <nr7fcall@...> wrote:
> > I'm moving along on the 3B build. It was sweet to hear the "8" in the headphones after
> > chasing down a couple soldering errors.
> >
> > Now, however, In doing the check and calibration steps called for in the instructions (just
> > after the filter board assembly), I found that when I put a voltmeter between ground and the
> > drain on Q4, the voltage is not slowly decaying to zero after I stop sending a series of "dahs".
> > The instructions indicate that the voltage should go slowly to zero.
> >
> > So, I guess there is a problem in the keying circuit. Suggestions on where to look for the

> > problem?
> >
> > Thanks.
> >
> > Mike NR7F
> >
>

2290. Re: ATS3B "Check and Calibration" Question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-27 00:56:35 UTC
From: mikee30h
Topic: 2286 Message: 2290

Thanks, Jim and Carey, for the info. I suspected an error in the instructions since it referred to a "large tab" on Q4; the tab on Q4 is definitely not large. I almost always assume the problem is me, not the instructions (because it IS usually ME that is causing the problem!)

The test works perfect on Q6, so it's in good shape so far.

Onward to the next test.

Mike-NR7F

--- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@...> wrote:
>
> --- In AT_Sprint@yahoogroups.com, <james.rushforth@> wrote:
> Jim,
>
> The test for the drain voltage, which should decay when you stop
> keying, is done on Q6, the mosfet with "2955" on it. This is a
> fairly large component with a large tab. The part is Q6 on the board
> designator, and it's Q6 on the REVISED drawing found in the FILES
> section here.
>
> The part is Q5 on the earlier drawing with errors in the
> designators. The text in the manual refers to Q4, which was correct
> for the "A" version.
>
> You really want to check the drain of Q6!
>
> 72
>
> Carey Fuller
> KX0R
>
>
> > Hi again Mike
> >
> > Think I should have said Q5 not Q6 - anyway, even if the test
> didn't work on Q4, the rig still work FB on CW.
> >
> > Jim
> >
> > G3ZPD
> >
> >
> > ---- mikee30h <nr7fcall@> wrote:
> > > I'm moving along on the 3B build. It was sweet to hear the "8" in

> the headphones after
> > > chasing down a couple soldering errors.
> > >
> > > Now, however, In doing the check and calibration steps called for
> in the instructions (just
> > > after the filter board assembly), I found that when I put a
> voltmeter between ground and the
> > > drain on Q4, the voltage is not slowly decaying to zero after I
> stop sending a series of "dahs".
> > > The instructions indicate that the voltage should go slowly to
> zero.
> > >
> > > So, I guess there is a problem in the keying circuit. Suggestions
> on where to look for the
> > > problem?
> > >
> > > Thanks.
> > >
> > > Mike NR7F
> > >
> >
>

2291. Drawing Error - ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-27 00:58:50 UTC
From: radio_kx0r
Topic: 2291 Message: 2291

All,

Since we're on the subject of designators, I found a really minor error on the new drawing for the receiver section. It affects the connections shown on the drawing, but there's no functional issue.

On the board, the bottom end of R2 is connected to pin 3 of U3a, the first LM4808 audio amp. Likewise, the bottom end of R4 is actually connected to pin 2 of U3a. These push-pull audio connections are reversed on the revised drawing. The number designators are OK, if you follow them from U2 down.

The drawing for the ATS-3A has the same reversal error.

This doesn't affect alignment or troubleshooting, unless you're working on those particular audio lines.

KX0R
Carey Fuller

2292. Re: [AT_Sprint] Nice design, JN1GLB. (See photo section)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-27 01:54:20 UTC
From: makoto kasahara
Topic: 2113 Message: 2292

Steve-san,

I uploaded Sch. to Photo section.
You can see an original circuit by JA1UXR in the following URL.
http://www.ikegami-net.com/TAKAO/HAM/tun/1.html

Thank you.

JN1GLB / Makoto

Get easy, one-click access to your favorites.
Make Yahoo! your homepage.
http://www.yahoo.com/r/hs

2293. Re: [AT_Sprint] batteries for ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-27 02:53:04 UTC
From: Fred Maas
Topic: 2271 Message: 2293

You do GOOD work !!!!

FD

On Nov 26, 2007 4:33 AM, Bill Noyce <WBNoyce@...> wrote:
>
>
>
>
>
>
> I've been disappointed with the 9v Lithium disposable batteries for
> transmitting. Their main design goal appears to be shelf life, so
> they last a long time in low-current applications. Google found a
> datasheet here:
> http://www.ultralifebatteries.com/documents/techsheets/UBI-5180_U9VLX.pdf
> that says "max discharge 120 mA continuous, pulse capability up to 400
> mA, depending"
> There's also a graph of voltage vs elapsed amp-hours for a 60-ohm
> load. The battery immediately drops to about 7.7 volts, and drops
> below 7 volts before 0.8 Ah.
>
> For lightweight disposable batteries that work in the cold, try
> lithium AAA's -- they do support high current applications.
> -- Bill, AB1AV
>
>
>
> On 11/25/07, Fred Maas <just.one.hill@...> wrote:
> >
> >
> >
> >
> >
> >
> > Contemplating power source for the ATS3B ... in its intended service,
> > which is to carry while ultra-running in the Rockies. Most of my runs
> > are from two to six hours at altitudes from 9,000 to 14,000 ft.
> >
> > 9 volt alkaloid
> >
> > E-flite LiPoly is 11.1 volts, 860 mAh, 2.4 ounces, $40, and needs a
> > special charger, careful handling
> >
> > another LiPoly was 2100 mAh, 6 ounces, $70, etc.

> >
> > but here http://www.nimhbattery.com/9v-ultralife-batteries-9-volt.htm
> >
> > is a 9 volt, 1200 mAh, 1 ounce, for $5.
> >
> > Has anyone tried these? Do they hold up under the relatively high
> > drain moments transmitting?
> >
> > Does anyone have better idea for small and light???
> >
> > 72, Fred kt5x
> >
>

2294. Re: [AT_Sprint] Nice design, JN1GLB. (See photo section)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-27 03:48:20 UTC
From: n0tu/Steve
Topic: 2113 Message: 2294

Thank you Makoto-san!!

On Nov 26, 2007 6:54 PM, makoto kasahara <makochin@...> wrote:
>
>
> Steve-san,
>
> I uploaded Sch. to Photo section.
> You can see an original circuit by JA1UXR in the following URL.
> http://www.ikegami-net.com/TAKAO/HAM/tun/1.html
>
> Thank you.
>
> JN1GLB / Makoto
>
> _____
> Get easy, one-click access to your favorites. Make Yahoo! your homepage.
>

2295. Re: RIT on 80m with ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-27 07:52:44 UTC
From: Jim Fraser
Topic: 1838 Message: 2295

Steve,

I updated my 3B firmware using the 220 ohm resistors in the interface cable and using the latest IAR software (slac050q.zip). 80m DFE and XIT now work as advertised. Looks like we still have to be in straight key mode to get the firmware version, but that is not important. Thanks for the updated firmware file.

Jim K6JF

2296. Re: [AT_Sprint] Re: RIT on 80m with ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-27 19:13:29 UTC
From: Steven Weber
Topic: 1838 Message: 2296

>now work as advertised. Looks like we still have to be in straight key
>mode to get the firmware version, but that is not important. Thanks for
>the updated firmware file.

I belive I have that fixed now and should up load the final, final version
of the firmware - eventually!
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2297. Soldering Iron - CAUTION!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-29 02:30:39 UTC
From: mpupeza
Topic: 2297 Message: 2297

DON'T USE AN STAINLESS STEEL 'KURLY KATE' TYPE SCOURING PAD TO CLEAN YOUR TIP!
My soldering iron tip went bad while I was halfway through the page 13 resistor installation of my 3B.
It started to not wet properly with little spots of unwettable areas on the tip, making it hard to get the proper flow of solder to my resistors - especially those little 603s!
I quit for the day, and ordered some ST-7 Weller conical tips from Newark! (They came in 3 days!)
I wondered WHY did this tip fail, after building many little kits? I use a WLC-100 cheapy Weller, which I control carefully with the adjustment. I haven't had this happen before, and I have made a bunch of SMD , and other, kits!
I then realized that, about a year ago, I stopped using a wet sponge and went to a recommendation, from a QRP group.
I placed a stainless steel 'Kurly Kate' type of scrubbing scouring pad into a small can and was using that! No wetting down with water!
It worked GREAT! I just poked the tip into the pad and turned or worked it around.
BUT, I now realize that it's been slowly taking the plating off the soldering tip!
With the new tips I've gone back to a wet sponge!
Messy, but I'm now confident that it'll keep the tip better.
I hope this helps.

Mike VE3EQP ......>

2298. Re: [AT_Sprint] Soldering Iron - CAUTION!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-29 02:38:07 UTC
From: w9ya@qrparci.net
Topic: 2297 Message: 2298

Hey Mike and the gang;

Your right... the correct 'Kurly Kate' is the brass-looking one.
(Copper/brass colored.) If you cannot find it at the local store, check
the electronic parts emporiums, although it will not be sold under the
"Kurly Kate".

I used one of these on my bench. My tips did NOT fail over a two plus year
period, using the iron several times a day, at least 5 days a week, in
daily bench repairs of electronics.

Vy 72;

Bob
w9ya

> DON'T USE AN STAINLESS STEEL 'KURLY KATE' TYPE SCOURING PAD TO CLEAN
> YOUR TIP!
> My soldering iron tip went bad while I was halfway through the page 13
> resistor installation of my 3B.
> It started to not wet properly with little spots of unwettable areas on
> the tip, making it hard to get the proper flow of solder to my
> resistors - especially those little 603s!
> I quit for the day, and ordered some ST-7 Weller conical tips from
> Newark! (They came in 3 days!)
> I wondered WHY did this tip fail, after building many little kits? I
> use a WLC-100 cheapy Weller, which I control carefully with the
> adjustment. I haven't had this happen before, and I have made a bunch
> of SMD , and other, kits!
> I then realized that, about a year ago, I stopped using a wet sponge
> and went to a recommendation, from a QRP group.
> I placed a stainless steel 'Kurly Kate' type of scrubbing scouring pad
> into a small can and was using that! No wetting down with water! It
> worked GREAT! I just poked the tip into the pad and turned or
> worked it around.
> BUT, I now realize that it's been slowly taking the plating off the
> soldering tip!
> With the new tips I've gone back to a wet sponge!
> Messy, but I'm now confident that it'll keep the tip better.
> I hope this helps.
>
> Mike VE3EQP ......>

Liviu Librescu - ?n veci pomenirea lui.
(May his memory be eternal.)

2299. Re: Soldering Iron - CAUTION!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-29 04:34:49 UTC
From: Paul J. Beckmann
Topic: 2297 Message: 2299

Here's another thought:

I used a wet sponge for decades until someone suggested placing a doubled-over hand towel on my thigh and wiping the tip of iron there every now and then. Yes, it is dry. No it doesn't burn the towel or your thigh unless you lay it down there and start looking for a lost 603! (You're not using a 60W iron, right?) Try different cloths until you find one that doesn't leave little strands of fuzz on the tip and you'll be a happy camper!

The major issues I have with the wet sponge technique are a) it drops the tip temperature dramatically and b) it thermally stresses the plating and may result in premature plating failure.

73
--Paul, wa0rse

--- In AT_Sprint@yahoogroups.com, "mpupeza" <mpupeza@...> wrote:
>
> DON'T USE AN STAINLESS STEEL 'KURLY KATE' TYPE SCOURING PAD TO CLEAN
> YOUR TIP!
> My soldering iron tip went bad while I was halfway through the page
> 13 resistor installation of my 3B.
> It started to not wet properly with little spots of unwettable areas
> on the tip, making it hard to get the proper flow of solder to my
> resistors - especially those little 603s!
> I quit for the day, and ordered some ST-7 Weller conical tips from
> Newark! (They came in 3 days!)
> I wondered WHY did this tip fail, after building many little kits? I
> use a WLC-100 cheapy Weller, which I control carefully with the
> adjustment. I haven't had this happen before, and I have made a bunch
> of SMD , and other, kits!
> I then realized that, about a year ago, I stopped using a wet sponge
> and went to a recommendation, from a QRP group.
> I placed a stainless steel 'Kurly Kate' type of scrubbing scouring
> pad into a small can and was using that! No wetting down with water!
> It worked GREAT! I just poked the tip into the pad and turned or
> worked it around.
> BUT, I now realize that it's been slowly taking the plating off the
> soldering tip!
> With the new tips I've gone back to a wet sponge!
> Messy, but I'm now confident that it'll keep the tip better.
> I hope this helps.
>
> Mike VE3EQP ......>
>

2300. KC2 and ATS3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-30 02:47:01 UTC
From: kc0pet
Topic: 2300 Message: 2300

Has anyone used a Wilderness KC2 keyer/counter with the ATS3 or know if it will work? I have an "A" and am thinking about enhancing it with a freq. counter. The KC2 is about the smallest kit I can find. I am open to other suggestions as well. I would like something that will fit in a 'toids tin. I plan to mount two tins back to back with the ATS3A in one and the counter and some larger push buttons in the other.

de KC0PET, Rick

2301. Nor'Easter SW kit question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-30 12:42:13 UTC
From: John Shadle
Topic: 2301 Message: 2301

I know this is the ATS list, but bear with me...

I am soon to be in the possession of one of Steve's/NorCal's Nor'Easter SW kits. It is similar to the ATS rigs, I believe, but only has RX capabilities.

In preparing for its arrival I have done a little searching on the web for any "issues" I may face as I assemble and align it. I found that the Atmel CPU needs to be reprogrammed in order to fix the 10KHz offset problem. Read here for more:

http://www.io.com/~n5fc/noreaster.html

"There's one other little bugaboo in the works... but it's only a minor inconvenience, and not a functional one. The microprocessor firmware, as delivered, displays the frequency as 10 KHz LOWER than the actual frequency selected. That is to say, if you want to tune to WWV at 10.000 MHz, the display will read 9.990 MHz. The designer, KD1JV, has indicated he is willing to reprogram the uP, for those that find this bug unsettling."

I contacted Steve, but haven't heard back if he can still do this. Maybe my email didn't get through the first time or he is out of town/busy. Can anyone help me out here or offer some advice on how I can do this myself?

Thanks.
-john W4PAH

2302. Re: [AT_Sprint] Nor'Easter SW kit question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-11-30 18:24:19 UTC
From: Steven Weber
Topic: 2301 Message: 2302

>
>I am soon to be in the possession of one of Steve's/NorCal's Nor'Easter
>SW kits. It is similar to the ATS rigs, I believe, but only has RX
>capabilities.
>

John,

I hate when really old kits come back to haunt me :-)

The NorCal Nor'easter is an AM only SWBC receiver with PLL VFO which tunes from about 5 to 16 MHz in 5 kHz steps.

It is quite possible the original owner had the chip reprogrammed. Unfortunetly, there is no way to tell until you build it (unless its already built).

The only way to reprogram that chip is with a Atmel programmer. To my knowlage, there aren't any simple programmers you can build yourself. You also have to build something to hold the chip and connect leads to it, as its a SMT chip. If its already on the board, wires have to be tacked onto it, as it doesn't have programmer pins built onto the board. Finally, you need to have the program to load into it.

I should have the program around here someplace. That project was done in the old DOS days. I guess I could still reprogram the CPU, but it might take me awhile to get around to spend the hour or two it will take to find and set up everything.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2303. ATS-3B Power Output

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-02 00:41:39 UTC
From: mikee30h
Topic: 1984 Message: 2303

I finally got to the last check on the 3B build, and although the radio works fine, power output on 40M seems low. I have only built and checked the 40M board at this point.

I only get about 1.5W with a 9v battery, and then about 3W with the 11.1v LiPo. With a full 12V I get a bit under 4W out. I have rechecked all windings and cap values. Scrunching or spreading out the windings has no significant effect. I used two different, accurate wattmeters and get the same output. Although I do not care about squeezing the last bit of power out, and I don't really want to modify the filter boards, these readings definitely seem to be on the low side by at least half a watt or so. Can anyone suggest something else to check? Has anyone else gotten similar results?

Thanks for any thoughts on this. Mike--NR7F

2304. Re: [AT_Sprint] ATS-3B Power Output

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-02 02:10:02 UTC
From: Michael Harnage
Topic: 1984 Message: 2304

If your 9V battery is a rectangular battery then I
would not trust it. Get a more robust 9V source and
see what it gives you. If your still "low" then short
of modifying the filter board (either turns on the
inductors, cap values or both) there is probably not
much else to do.

Everyone of my filter boards (3, 3A, and 3B) are
modified from stock. I don't change them for max power
but rather uniform power and I shoot for 2.5 watts
with a 9V source. This usually gives me 4+ watts with
a 3 cell lipo which is plenty for me.

-mike/w1mt

--- mikee30h <nr7fcall@...> wrote:

> I finally got to the last check on the 3B build, and
> although the
> radio works fine, power output on 40M seems low. I
> have only built and
> checked the 40M board at this point.
>
> I only get about 1.5W with a 9v battery, and then
> about 3W with the
> 11.1v LiPo. With a full 12V I get a bit under 4W
> out. I have rechecked
> all windings and cap values. Scrunching or spreading
> out the windings
> has no significant effect. I used two different,
> accurate wattmeters
> and get the same output. Although I do not care
> about squeezing the
> last bit of power out, and I don't really want to
> modify the filter
> boards, these readings definitely seem to be on the
> low side by at
> least half a watt or so. Can anyone suggest
> something else to check?
> Has anyone else gotten similar results?
>
> Thanks for any thoughts on this. Mike--NR7F
>

Be a better sports nut! Let your teams follow you

with Yahoo Mobile. Try it now.
http://mobile.yahoo.com/sports;_ylt=At9_qDKvtAbMuh1G1SQtBI7ntAcJ

2305. Re: ATS-3B Power Output

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-02 06:06:25 UTC
From: mikee30h
Topic: 1984 Message: 2305

Well, after scrunching both windings the power came up a bit. Once I glued them in place it seemed like the power came up even a little more. It's just under 2W with the 9V, 3.5W with the 11V, and a solid 4.5 with 12V. This just about in line with my 3A, so that's fine for me. I think initially I just hadn't scrunched the windings enough, and them I was only doing one or the other. In this case, it's works best with both of them scrunched up.

Mike--NR7F

--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:
>
> If your 9V battery is a rectangular battery then I
> would not trust it. Get a more robust 9V source and
> see what it gives you. If your still "low" then short
> of modifying the filter board (either turns on the
> inductors, cap values or both) there is probably not
> much else to do.
>
> Everyone of my filter boards (3, 3A, and 3B) are
> modified from stock. I don't change them for max power
> but rather uniform power and I shoot for 2.5 watts
> with a 9V source. This usually gives me 4+ watts with
> a 3 cell lipo which is plenty for me.
>
> -mike/w1mt
>
>
>
> --- mikee30h <nr7fcall@...> wrote:
>
> > I finally got to the last check on the 3B build, and
> > although the
> > radio works fine, power output on 40M seems low. I
> > have only built and
> > checked the 40M board at this point.
> >
> > I only get about 1.5W with a 9v battery, and then
> > about 3W with the
> > 11.1v LiPo. With a full 12V I get a bit under 4W
> > out. I have rechecked
> > all windings and cap values. Scrunching or spreading
> > out the windings
> > has no significant effect. I used two different,
> > accurate wattmeters

> > and get the same output. Although I do not care
> > about squeezing the
> > last bit of power out, and I don't really want to
> > modify the filter
> > boards, these readings definitely seem to be on the
> > low side by at
> > least half a watt or so. Can anyone suggest
> > something else to check?
> > Has anyone else gotten similar results?
> >
> > Thanks for any thoughts on this. Mike--NR7F
> >
>
>
>

> Be a better sports nut! Let your teams follow you
> with Yahoo Mobile. Try it now.
http://mobile.yahoo.com/sports;_ylt=At9_qDKvtAbMuh1G1SQtBI7ntAcJ
>

2306. Why not upside down Filter Trimmers!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-02 16:00:47 UTC
From: mpupeza
Topic: 2306 Message: 2306

Steve, et al;
Why not mount the Filter Board Timmers upside down, folding back the existing tabs and using short lengths of solid wire to the holes?
I'm at the stage of making the Filter Boards and can't see any problem with doing that - thus allowing changes of adjustment through the holes already made for the older bottom adjust trimmers.
I may make one to try myself - it's easy enough to change back!
My preliminary tests show the newly assembled main board to be 'alive', so I am pleased.
Now to make the box, some filter boards and try it out!
I have been logging my assembly times, and will let the group know the times I needed for the various stages in assembly - when I'm finished!
What do you think of the idea? It would allow future adjustments if the cores had to be played with?
72, 73
Mike VE3EQP/W4 .....>

2307. Its Alive!!!!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-02 16:21:16 UTC
From: billg5x
Topic: 2307 Message: 2307

my newly built ats3b is alive and amazing.
I have only built two filter boards so far
and I haven't transmitted, but the recieve
seems very good. I have copied psk from
Florida, New York, and Canada so far.

Thanks Steve. Great kit.

Bill, ni5x.

2308. Re: [AT_Sprint] Re: ATS-3B Power Output

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-02 15:45:10 UTC
From: Steven Weber
Topic: 1984 Message: 2308

>Well, after scrunching both windings the power came up a bit. Once I
>glued them in place it seemed like the power came up even a little

If you had to scrunch up both windings, adding one turn to each core will likely bring the power up to where it should be. Is it possible you happened to wind them one turn short? (though most people forget to count the first turn and end up with one to many)

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2309. Re: ATS-3B Power Output

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-02 17:36:53 UTC
From: radio_kx0r
Topic: 1984 Message: 2309

--- In AT_Sprint@yahoogroups.com, "mikee30h" <nr7fcall@...> wrote:

Mike,

When I brought up 40M on my ATS-3A and also my ATS-3B, I saw about the same power levels you stated.

I posted details on how to optimize ATS-3B filter boards here. It's a WORD file in the FILES section. Please also look at my other WORD file listing the power output and currents I ended up with for all the bands.

On 40M I needed to increase C2F by adding 150 pf in parallel with the existing 680 pf cap. I found the same issue with the 40M module on my ATS-3A - power output really IS low on 40M. The coil adjustments are more reasonable after the increase to C2F. Adding to C2F is easier than rewinding a toroid, which is another reasonable option.

You probably can get 2.9W @ 9V and 5W @ 12V on 40M just by adding capacitance to C2F and re-adjusting your toroid windings.

Try tacking 50 or 100 pf across C2F, and re-adjust the windings, just to see if that takes you toward where you want to go.

Please read both of my writeups if you want to optimize all your modules.

The finals in this rig are getting strong gate drive on all bands. If the power is low, it's probably because the filters aren't quite matching the available output to the load. Be reasonable, and don't get greedy, if you make adjustments; monitor your current.

Efficiency is higher on the lower frequencies, so if you want to be conservative, optimize the low bands 80, 40, and 30M; and settle for a little less output on the higher three bands - like 2.5W @ 9V and 4.5W @ 12V.

72/73
KX0R
Carey Fuller

> Well, after scrunching both windings the power came up a bit. Once I
> glued them in place it seemed like the power came up even a little
> more. It's just under 2W with the 9V, 3.5W with the 11V, and a solid
> 4.5 with 12V. This just about in line with my 3A, so that's fine for
> me. I think initially I just hadn't scrunched the windings enough,
and

> them I was only doing one or the other. In this case, it's works
best
> with both of them scrunched up.
>
> Mike--NR7F
>
> --- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@> wrote:
> >
> > If your 9V battery is a rectangular battery then I
> > would not trust it. Get a more robust 9V source and
> > see what it gives you. If your still "low" then short
> > of modifying the filter board (either turns on the
> > inductors, cap values or both) there is probably not
> > much else to do.
> >
> > Everyone of my filter boards (3, 3A, and 3B) are
> > modified from stock. I don't change them for max power
> > but rather uniform power and I shoot for 2.5 watts
> > with a 9V source. This usually gives me 4+ watts with
> > a 3 cell lipo which is plenty for me.
> >
> > -mike/w1mt
> >
> >
> >
> > --- mikee30h <nr7fcall@> wrote:
> >
> > > I finally got to the last check on the 3B build, and
> > > although the
> > > radio works fine, power output on 40M seems low. I
> > > have only built and
> > > checked the 40M board at this point.
> > >
> > > I only get about 1.5W with a 9v battery, and then
> > > about 3W with the
> > > 11.1v LiPo. With a full 12V I get a bit under 4W
> > > out. I have rechecked
> > > all windings and cap values. Scrunching or spreading
> > > out the windings
> > > has no significant effect. I used two different,
> > > accurate wattmeters
> > > and get the same output. Although I do not care
> > > about squeezing the
> > > last bit of power out, and I don't really want to
> > > modify the filter
> > > boards, these readings definitely seem to be on the
> > > low side by at
> > > least half a watt or so. Can anyone suggest
> > > something else to check?
> > > Has anyone else gotten similar results?

> > >
> > > Thanks for any thoughts on this. Mike--NR7F
> > >
> >
> >
> >
>

> > Be a better sports nut! Let your teams follow you
> > with Yahoo Mobile. Try it now.
> http://mobile.yahoo.com/sports;_ylt=At9_qDKvtAbMuh1G1SQtBI7ntAcJ
> >
>

2310. Re: ATS-3B Power Output

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-02 18:29:44 UTC
From: mikee30h
Topic: 1984 Message: 2310

Thanks for the comments everyone. I'm always so paranoid about putting the wrong number of windings on toroids that I recheck them a ridiculous number of times, and I've got the correct number of turns on there. It's the one mistake I haven't made in kit building...yet...and I've made some doosies.

Changing the number of windings, or the capacitance as Carey suggested would have probably been a nice option. It's something that I'll keep in mind for the other boards.

In any case, I'm quite happy with the output I have now. I don't really feel like I need that last half watt. My 3A has worked fine with those power levels, so that's sort of been my target.

Mike--NR7F

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
>
> >Well, after scrunching both windings the power came up a bit. Once I
> >glued them in place it seemed like the power came up even a little
>
> If you had to scrunch up both windings, adding one turn to each core will
> likely bring the power up to where it should be. Is it possible you
> happened to wind them one turn short? (though most people forget to count
> the first turn and end up with one to many)
>
>
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com
>

2311. 911 for Steve KD1JV

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-02 14:33:36 UTC
From: W2AGN
Topic: 2311 Message: 2311

I have tried several direct emails to Steve, but possible I am in a spam filter? I just opened the package my QBSA came in March 30, 2007 (I know, I got started late, but wanted to finish the ATS3B). Anyway, I am missing the CIRCUIT BOARDS. I checked throughly, in the CD envelope, etc. No circuit boards. A missing capacitor or resistor, or even IC I could handle, but need the circuit boards pretty much ;-)

--

_ _ _ _ _
/ \ / \ / \ / \ / \ John L. Sielke
(W)(2)(A)(G)(N) http://w2agn.net
_/ _/ _/ _/ _/ http://www.blurty.com/users/w2agn
check out: http://groups.yahoo.com/group/QRPariahs/

2312. Re: [AT_Sprint] Why not upside down Filter Trimmers!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-03 00:57:14 UTC
From: Fred Maas
Topic: 2306 Message: 2312
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2313. Re: [AT_Sprint] 911 for Steve KD1JV

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-03 00:59:23 UTC
From: Fred Maas
Topic: 2311 Message: 2313
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2314. Re: [AT_Sprint] 911 for Steve KD1JV

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-03 01:31:24 UTC
From: Kurt Savegnago
Topic: 2311 Message: 2314

Other thing is last I looked, he was still selling
the QBSA. Probably has some boards around.

Kurt KC9LDH
--- W2AGN <w2agn@...> wrote:

> I have tried several direct emails to Steve, but
> possible I am in a spam filter?
> I just opened the package my QBSA came in March 30,
> 2007 (I know, I got started
> late, but wanted to finish the ATS3B). Anyway, I am
> missing the CIRCUIT BOARDS.
> I checked throughly, in the CD envelope, etc. No
> circuit boards. A missing
> capacitor or resistor, or even IC I could handle,
> but need the circuit boards
> pretty much ;-)
>
>
> --
> ---
> _ _ _ _ _
> / \ / \ / \ / \ / \ John L. Sielke
> (W)(2)(A)(G)(N) http://w2agn.net
> _/ _/ _/ _/ _/
> http://www.blurty.com/users/w2agn
> check out: http://groups.yahoo.com/group/QRPariahs/
>
>
>
> Yahoo! Groups Links
>
>
>
>
>

Slackware user since 1994

2315. Re: [AT_Sprint] 911 for Steve KD1JV

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-03 02:55:08 UTC
From: Steven Weber
Topic: 2311 Message: 2315

>Other thing is last I looked, he was still selling
>the QBSA. Probably has some boards around.
>
I guess I'm offically sold out now. Had 2 left, but a check is in the mail for one and I'll have to give John the board for the last remaining one. As far as I know, I have no extra boards and everything came out even, so don't know what might have become of yours John. Oh, and this is the first I heard of the problem. I don't check the spam filter, as they get trapped by my ISP and have to get on line to do that. With dial up and pay-per-minute phone line (yeah, I'm the last one in the world to have such a thing, but on the average its cheaper, as it is in a buisness name) I try not to spend much time on line. Emails are quick.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2316. Starting to build my ATS-3B - couple simple questions

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-03 05:01:22 UTC
From: Jack B.
Topic: 2316 Message: 2316

1. Is it safe to assume the coils are all wound clockwise?

2. Are the link windings for LF3 on the 80m filter board wound with
the #32 wire?

That's all.

I did all the RF1 SMT resistors in one fell swoop using the hot air
method. I had decided to ramp my way into this particular project by
starting with the filter boards.

This is following on the great success I had using the SMT Hot Air
Method to assemble a NorCal Tuner Upper for 30m (see:
http://www.k6jeb.com/2007/11/30/using-the-hot-air-method-to-assemble-a-30m-norcal-tuner-upper-smt-kit-november-30th-2007/
).

Hints and Kinks:
If you don't want to worry about whether you wound the right number of
turns on a toroid (but you didn't count as you wound) and you don't
have access to enough magnification, just use your scanner (the one
under all the QRP Journals and boxes of through-hole parts) and use
any decent graphic viewer (FastStone Image Viewer is a great one and
it's free) to zoom in and save the magnifying glass for other things.

72/73
Jack, K6JEB

PS - I started building this rig in hopes of having something small
enough to take with on my travels next year (India is the current plan).

2317. Re: Starting to build my ATS-3B - couple simple questions

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-03 05:27:44 UTC
From: Jim Fraser
Topic: 2316 Message: 2317

Jack:

I wound my coils in the counter-clockwise direction away from my thumb holding the core. But I am right-handed, a left-handed person might go the opposite direction. I doubt that it really makes any difference or else Steve would have stated something in the directions.

On the 80m LF3 I used #32 wire for both the main and link windings. Even then it was tough to get all the turns on.

Like you I started my 3B by building the band modules. I figured if I did them last I would be in too much a rush to get them done and increase the chances of making a mistake. I hand soldered my 3B though. Good idea on counting the windings using a scanner.

Off topic, I think I heard you on 20m PSK31 recently, but you were quite weak as we are pretty close (Sunnyvale), so I did not call.

Have fun building the kit, I sure did!

72,
Jim K6JF

--- In AT_Sprint@yahoogroups.com, "Jack B." <k6jeb@...> wrote:
>
> 1. Is it safe to assume the coils are all wound clockwise?
>
> 2. Are the link windings for LF3 on the 80m filter board wound with
> the #32 wire?
>
> That's all.
>
> I did all the RF1 SMT resistors in one fell swoop using the hot air
> method. I had decided to ramp my way into this particular project
by
> starting with the filter boards.
>
> This is following on the great success I had using the SMT Hot Air
> Method to assemble a NorCal Tuner Upper for 30m (see:
> http://www.k6jeb.com/2007/11/30/using-the-hot-air-method-to-
assemble-a-30m-norcal-tuner-upper-smt-kit-november-30th-2007/
>).
>
> Hints and Kinks:
> If you don't want to worry about whether you wound the right number
of

> turns on a toroid (but you didn't count as you wound) and you don't
> have access to enough magnification, just use your scanner (the one
> under all the QRP Journals and boxes of through-hole parts) and use
> any decent graphic viewer (FastStone Image Viewer is a great one and
> it's free) to zoom in and save the magnifying glass for other
things.
>
> 72/73
> Jack, K6JEB
>
> PS - I started building this rig in hopes of having something small
> enough to take with on my travels next year (India is the current
plan).
>

2318. Re: Starting to build my ATS-3B - couple simple questions

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-03 05:50:32 UTC
From: Jack B.
Topic: 2316 Message: 2318

Hi Jim and Other ATS-3 folks,
Thank you so much for the quick response. I'm done winding the other two toroids and will now finish the LF3 link windings with the #32 wire.

I have a goal to to one of these filters per night until I have them done. This will be my second, the 20m being the first.

This Yahoo Group (or group of yahoos hi hi) has been an immense source of inspiration and information on the ATS-3(A and B). Thanks!

Since my wife and I are selling our home (hopefully to get a larger antenna garden) I'm down to just my Butternut HF9V up on the roof so I imagine that plus the ridge between you and I kept the signals pretty far down. But with all the great stations down your way, that ridge has probably saved my front end on several occasions hi hi!

Hoping to do some HF Pack PSK eventually with my ATS-3's.

72/73!
Jack, K6JEB
www.k6jeb.com

--- In AT_Sprint@yahoogroups.com, "Jim Fraser" <jimf53@...> wrote:
>
> Jack:
>
> I wound my coils in the counter-clockwise direction away from my
> thumb holding the core. But I am right-handed, a left-handed person
> might go the opposite direction. I doubt that it really makes any
> difference or else Steve would have stated something in the
> directions.
>
> On the 80m LF3 I used #32 wire for both the main and link windings.
> Even then it was tough to get all the turns on.
>
> Like you I started my 3B by building the band modules. I figured if I
> did them last I would be in too much a rush to get them done and
> increase the chances of making a mistake. I hand soldered my 3B
> though. Good idea on counting the windings using a scanner.
>
> Off topic, I think I heard you on 20m PSK31 recently, but you were
> quite weak as we are pretty close (Sunnyvale), so I did not call.
>
> Have fun building the kit, I sure did!
>
> 72,

> Jim K6JF
>
> --- In AT_Sprint@yahoogroups.com, "Jack B." <k6jeb@> wrote:
> >
> > 1. Is it safe to assume the coils are all wound clockwise?
> >
> > 2. Are the link windings for LF3 on the 80m filter board wound with
> > the #32 wire?
> >
> > That's all.
> >
> > I did all the RF1 SMT resistors in one fell swoop using the hot air
> > method. I had decided to ramp my way into this particular project
> by
> > starting with the filter boards.
> >
> > This is following on the great success I had using the SMT Hot Air
> > Method to assemble a NorCal Tuner Upper for 30m (see:
> > http://www.k6jeb.com/2007/11/30/using-the-hot-air-method-to-
> assemble-a-30m-norcal-tuner-upper-smt-kit-november-30th-2007/
> >).
> >
> > Hints and Kinks:
> > If you don't want to worry about whether you wound the right number
> of
> > turns on a toroid (but you didn't count as you wound) and you don't
> > have access to enough magnification, just use your scanner (the one
> > under all the QRP Journals and boxes of through-hole parts) and use
> > any decent graphic viewer (FastStone Image Viewer is a great one and
> > it's free) to zoom in and save the magnifying glass for other
> things.
> >
> > 72/73
> > Jack, K6JEB
> >
> > PS - I started building this rig in hopes of having something small
> > enough to take with on my travels next year (India is the current
> plan).
> >
>

2319. Re: Starting to build my ATS-3B - couple simple questions

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-03 07:20:55 UTC
From: Jack B.
Topic: 2316 Message: 2319

Also, looking at the remainder of the CT trimmers (I have two brown ones mounted on the 20m filter board) I have eight green ones and two brown ones. The green CT trimmers have no markings to differentiate them. Besides visions of a Wouff Hong coming down hard on my hands typing this, I'm also getting a very distinct image of me pulling out my Multimeter and measuring these components for capacitance and that would be just as good a method of figuring out which trimmers go on which board.

One problem, I'm not seeing the values for each of the boards/bands. Can someone point me in the right direction? As I said before, I already have the 20m board built (of course) and was on homestrech with the 80m board when I realized I could tell which of these to use since there are no brown/green markings. Just a green or brown casing.

:)

72/73,
Jack, K6JEB

--- In AT_Sprint@...m, "Jack B." <k6jeb@...> wrote:
>
> Hi Jim and Other ATS-3 folks,
> Thank you so much for the quick response. I'm done winding the other
> two toroids and will now finish the LF3 link windings with the #32
wire.
>
> I have a goal to to one of these filters per night until I have them
> done. This will be my second, the 20m being the first.
>
> This Yahoo Group (or group of yahoos hi hi) has been an immense source
> of inspiration and information on the ATS-3(A and B). Thanks!
>
> Since my wife and I are selling our home (hopefully to get a larger
> antenna garden) I'm down to just my Butternut HF9V up on the roof so I
> imagine that plus the ridge between you and I kept the signals pretty
> far down. But with all the great stations down your way, that ridge
> has probably saved my front end on several occasions hi hi!
>
> Hoping to do some HF Pack PSK eventually with my ATS-3's.
>
> 72/73!
> Jack, K6JEB
> www.k6jeb.com
>
>

>
> --- In AT_Sprint@yahoogroups.com, "Jim Fraser" <jimf53@> wrote:
> >
> > Jack:
> >
> > I wound my coils in the counter-clockwise direction away from my
> > thumb holding the core. But I am right-handed, a left-handed person
> > might go the opposite direction. I doubt that it really makes any
> > difference or else Steve would have stated something in the
> > directions.
> >
> > On the 80m LF3 I used #32 wire for both the main and link windings.
> > Even then it was tough to get all the turns on.
> >
> > Like you I started my 3B by building the band modules. I figured if I
> > did them last I would be in too much a rush to get them done and
> > increase the chances of making a mistake. I hand soldered my 3B
> > though. Good idea on counting the windings using a scanner.
> >
> > Off topic, I think I heard you on 20m PSK31 recently, but you were
> > quite weak as we are pretty close (Sunnyvale), so I did not call.
> >
> > Have fun building the kit, I sure did!
> >
> > 72,
> > Jim K6JF
> >
> > --- In AT_Sprint@yahoogroups.com, "Jack B." <k6jeb@> wrote:
> > >
> > > 1. Is it safe to assume the coils are all wound clockwise?
> > >
> > > 2. Are the link windings for LF3 on the 80m filter board wound with
> > > the #32 wire?
> > >
> > > That's all.
> > >
> > > I did all the RF1 SMT resistors in one fell swoop using the hot air
> > > method. I had decided to ramp my way into this particular project
> > by
> > > starting with the filter boards.
> > >
> > > This is following on the great success I had using the SMT Hot Air
> > > Method to assemble a NorCal Tuner Upper for 30m (see:
> > > http://www.k6jeb.com/2007/11/30/using-the-hot-air-method-to-
> > assemble-a-30m-norcal-tuner-upper-smt-kit-november-30th-2007/
> > >).
> > >
> > > Hints and Kinks:
> > > If you don't want to worry about whether you wound the right number
> > of

> > > turns on a toroid (but you didn't count as you wound) and you don't
> > > have access to enough magnification, just use your scanner (the one
> > > under all the QRP Journals and boxes of through-hole parts) and use
> > > any decent graphic viewer (FastStone Image Viewer is a great one and
> > > it's free) to zoom in and save the magnifying glass for other
> > things.
> > >
> > > 72/73
> > > Jack, K6JEB
> > >
> > > PS - I started building this rig in hopes of having something small
> > > enough to take with on my travels next year (India is the current
> > plan).
> > >
> >
>

2320. Re: [AT_Sprint] 911 for Steve KD1JV

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-03 14:42:19 UTC
From: W2AGN
Topic: 2311 Message: 2320

Steven Weber wrote:
>> Other thing is last I looked, he was still selling
>> the QBSA. Probably has some boards around.
>>
> I guess I'm offically sold out now. Had 2 left, but a check is in the mail
> for one and I'll have to give John the board for the last remaining one. As
> far as I know, I have no extra boards and everything came out even, so
> don't know what might have become of yours John. Oh, and this is the first
> I heard of the problem. I don't check the spam filter, as they get trapped
> by my ISP and have to get on line to do that. With dial up and
> pay-per-minute phone line (yeah, I'm the last one in the world to have such
> a thing, but on the average its cheaper, as it is in a buisness name) I try
> not to spend much time on line. Emails are quick.
>
>
>

Glad I finally got through the spam filters. I just opened the package the other day. I put the contents in the large tray I use for SMD building, and absolutely sure there were no circuit boards.

John

2321. Time to build ATS-IIIB - my way!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-03 16:49:29 UTC
From: mpupeza
Topic: 2321 Message: 2321

Hi;
OK, Yippee again!
My ATS-3B is alive and working well on 40M so I thought that I'd
share my building times, for those budding future builders.
I used a coathanger doofus and hand soldering, and am pleased with
the results. I used +2.00 reading glasses and an Optovisor Number 5!
Obviously, my times will NOT be typical for all builders, as, though
I am skilled, I try to be precise and I am, maybe, slower than most!
Here we go!

Page 15 Resistors back side 100 Min 2 sessions
Page 16 Resistors Front 55 Min 1 session
Page 17 Capacitors Back 95 Min 2 sessions
Front 10 Min
Page 19 Active Devices 90 Min 2 sessions
Page 20 Thru-holes 105 Min 2 sessions
Page 21 Filter Modules 360 Min 6 sessions
Pages 23/24 Tesing/Calibration 30 Min 1 session
Page 25 Altoids Box mounting 180 Min 3 sessions

So, my worst case scenario, is 19 sessions of less than an hour each.
I usually did about 3 sessions per day. 2 in the morning and one
after lunch! Obviously, I am retired, and a senior!
While I still have 5 Filter Modules to go - I did the rest in about
one week.
A fun project, and I had NO issues after completion.
I hope all goes as well with others!
72,73
Mike VE3EQP/W4 .....>

2322. Re: Time to build ATS-IIIB - my way!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-03 20:41:49 UTC
From: Randal
Topic: 2321 Message: 2322

Mike,
Congratulations on your progress. You will find the Bee as much fun to operate as it was to build.

You have made a very important point that I hope does not go un-noticed.

How fast you build is no where near as important as How Well you build.

72,
Ran

2323. Question about the CT Trimmers on the filter boards for the ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-03 20:49:57 UTC
From: Jack B.
Topic: 2323 Message: 2323

Looking at the remainder of the CT trimmers (I have two brown ones mounted on the 20m filter board) I have eight green ones and two brown ones. The green CT trimmers have no markings to differentiate them. Besides visions of a Wouff Hong coming down hard on my hands typing this, I'm also getting a very distinct image of me pulling out my Multimeter and measuring these components for capacitance and that would be just as good a method of figuring out which trimmers go on which board.

One problem, I'm not seeing the values for each of the boards/bands. Can someone point me in the right direction? As I said before, I already have the 20m board built (of course) and was on homestrech with the 80m board when I realized I could tell which of these to use since there are no brown/green markings. Just a green or brown casing.

:)

72/73,
Jack, K6JEB

2324. Re: [AT_Sprint] Question about the CT Trimmers on the filter boards for the ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-03 21:28:32 UTC
From: Michael Harnage
Topic: 2323 Message: 2324

Jack,

I hope that Steve chimes in here for ya, but based on
the past and how I think it may work I think you are
going to have to pull the brown trimmers from the 20m
board. The brown trimmers are probably for 80 amd 40
and the green the rest. OR the brown are for 15 and 17
and the green the rest. Either way I think 20m is
going to be green.

You could always measure them and match them properly
so that the rx filter is tuned correctly. It is a
simple double tuned design and the LC calculations are
straightforward and standard.

If Steve doesn't chime in soon, answer back with
measure values and we can try to help you sort it out.

By the way, here are the values for the original
trimmers on the first batch of 3B's

>BROWN/RED 70p
>BROWN/GREEN 50p
>BROWN 40p

-mike/w1mt

--- "Jack B." <k6jeb@...> wrote:

> Looking at the remainder of the CT trimmers (I have
> two brown
> ones mounted on the 20m filter board) I have eight
> green ones and two
> brown ones. The green CT trimmers have no markings
> to differentiate
> them.

Get easy, one-click access to your favorites.
Make Yahoo! your homepage.
http://www.yahoo.com/r/hs

2325. a different approach to winding toroids

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-04 02:04:00 UTC
From: Fred Maas
Topic: 2325 Message: 2325
Attachments: 3 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2326. on the air

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-04 02:09:54 UTC
From: Fred Maas
Topic: 2326 Message: 2326
Attachments: 3 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2327. Re: [AT_Sprint] Question about the CT Trimmers on the filter boards for the ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-04 03:42:36 UTC
From: Steven Weber
Topic: 2323 Message: 2327

>One problem, I'm not seeing the values for each of the boards/bands.
>Can someone point me in the right direction? As I said before, I
>already have the 20m board built (of course) and was on homestrech
>with the 80m board when I realized I could tell which of these to use
>since there are no brown/green markings. Just a green or brown casing.

Jack,

I hope your using the instructions on the CD which came with the kit. You have a second run kit and use different trimmers and hence different instructions than those used for the first run kits. The manual which is in the files section is for the first run kits, not the second.

All the brown trimmers are of one value (70p) and all the green are of another (30P) The brown trimmers are used on the 80 and 40 meter board and the greens on 30 and higher boards. This is all explained on page 21 and 22 of the run2 manual.

The reason for this change is that I had already bought all of the type of trimmers used in the 100 kits which were available in the US. To get more would have ment a minimum order for like 2500 pieces and 10 had week lead time. So, I had to use something else which was available.

2328. Re: Question about the CT Trimmers on the filter boards for the ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-04 04:07:56 UTC
From: Jack B.
Topic: 2323 Message: 2328

Thanks Steve,
That's exactly right. No worries, I only need to unsolder the two
brown trimmers from the finished 20m board. I've gotten into a groove
with one board per night (that includes the toroid winding) and still
be able to hang out with the wife and even watch a movie.

I had indeed just downloaded the manual from the web instead of using
the file on the included CDROM. Good head's up!

72/73!
Jack, K6JEB

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
>
> >One problem, I'm not seeing the values for each of the boards/bands.
> >Can someone point me in the right direction? As I said before, I
> >already have the 20m board built (of course) and was on homestrech
> >with the 80m board when I realized I could tell which of these to use
> >since there are no brown/green markings. Just a green or brown casing.
>
> Jack,
>
> I hope your using the instructions on the CD which came with the
kit. You
> have a second run kit and use different trimmers and hence different
> instructions than those used for the first run kits. The manual
which is in
> the files section is for the first run kits, not the second.
>
> All the brown trimmers are of one value (70p) and all the green are of
> another (30P) The brown trimmers are used on the 80 and 40 meter
board and
> the greens on 30 and higher boards. This is all explained on page 21
and 22
> of the run2 manual.
>
> The reason for this change is that I had already bought all of the
type of
> trimmers used in the 100 kits which were available in the US. To get
more
> would have ment a minimum order for like 2500 pieces and 10 had week
lead
> time. So, I had to use something else which was available.
>

2329. Another Run of ATS

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-04 16:35:35 UTC
From: Matt
Topic: 2329 Message: 2329

Is there going to be another run of the ATS or am i pretty much stuck homebrewing one if i want one?

KD8DAO

2330. Re: [AT_Sprint] Another Run of ATS

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-04 17:06:20 UTC
From: Kurt Savegnago
Topic: 2329 Message: 2330

--- Matt <kd8dao@...> wrote:

> Is there going to be another run of the ATS or am i
> pretty much stuck
> homebrewing one if i want one?
>
>
> KD8DAO

LOL home brewing.:-) Steve had mentioned something
about a 3rd run after the holidays. I imagine if the
interested parties gang up on him with a pile of
emails, he might be cajoled into doing another run.;-)

Cripes, I would have thought that local hams would
have volunteered labor to help get the kits together
if they
get the privilege to buy one! :-)

Then again, if he thinks of something else to do with
the ATS, he might wait to issue a "new and improved"
model. I thought he posted that he thought he has
gone as far as he could with the ATS and if he wanted
to do some other things with the platform, it would
take more battery power. Don't hold me to this but
just my
recollection.

Kurt KC9LDH

Slackware user since 1994

2331. power plug issues

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-04 17:24:09 UTC
From: John Shadle
Topic: 2331 Message: 2331

Whenever I apply power to the rig by plugging in the 9V battery I have to twist the plug in the jack and hold it in a certain position before the rig comes alive. If I let go of the plug and let it sit where it wants, there is no power. Clearly I can't hold the plug at an angle and operate the rig...

Anyone have suggestions as to the remedy to this problem?

Thanks.
-john W4PAH

2332. Re: power plug issues

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-04 17:46:05 UTC
From: radio_kx0r
Topic: 2331 Message: 2332

--- In AT_Sprint@yahoogroups.com, John Shadle <shadle@...> wrote:

John,

Does this bad connection happen with the rig mounted in a box, or on the unmounted board?

If the rig is in a box, make sure that the power plug can go deep enough into the receptacle - the board has to be mounted at the very end of the box for the connectors to mate correctly. The two corners of the power-plug end the board must be rounded to make it possible to fit the board in correctly. The manual describes this.

If the poor connection happens on the unmounted board, it indicates a problem inside one of the power connectors - if the connector to the battery looks OK, it might be the receptacle on the board.

Be sure the power plug's inserted far enough.

Has anyone else seen this problem?

KX0R
Carey Fuller

> Whenever I apply power to the rig by plugging in the 9V battery I have
> to twist the plug in the jack and hold it in a certain position before
> the rig comes alive. If I let go of the plug and let it sit where it
> wants, there is no power. Clearly I can't hold the plug at an angle and
> operate the rig...
>
> Anyone have suggestions as to the remedy to this problem?
>
> Thanks.
> -john W4PAH
>

2333. power plug issues resolved

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-04 18:01:29 UTC
From: shadle
Topic: 2331 Message: 2333

Once again, I prove how dopey I can be sometimes.

I met some resistance when shoving the plug in the jack and didn't
want to press it in further. When I kept on pushing it went in quite
snugly and everything is good to go now.

<sigh>

Sorry to waste the bandwidth.

-john

--- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@...> wrote:
>
> --- In AT_Sprint@yahoogroups.com, John Shadle <shadle@> wrote:
>
> John,
>
> Does this bad connection happen with the rig mounted in a box, or on
> the unmounted board?
>
> If the rig is in a box, make sure that the power plug can go deep
> enough into the receptacle - the board has to be mounted at the very
> end of the box for the connectors to mate correctly. The two corners
> of the power-plug end the board must be rounded to make it possible
> to fit the board in correctly. The manual describes this.
>
> If the poor connection happens on the unmounted board, it indicates a
> problem inside one of the power connectors - if the connector to the
> battery looks OK, it might be the receptacle on the board.
>
> Be sure the power plug's inserted far enough.
>
> Has anyone else seen this problem?
>
> KX0R
> Carey Fuller
>
> > Whenever I apply power to the rig by plugging in the 9V battery I
> have
> > to twist the plug in the jack and hold it in a certain position
> before
> > the rig comes alive. If I let go of the plug and let it sit where
> it
> > wants, there is no power. Clearly I can't hold the plug at an angle
> and

> > operate the rig...
> >
> > Anyone have suggestions as to the remedy to this problem?
> >
> > Thanks.
> > -john W4PAH
> >
>

2334. Re: Another Run of ATS

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-04 20:20:01 UTC
From: Jim Fraser
Topic: 2329 Message: 2334

Per one of Steve's recent posts, a third run would likely not be until
next Summer.

http://groups.yahoo.com/group/AT_Sprint/message/2216

Jim K6JF

--- In AT_Sprint@yahoogroups.com, "Matt" <kd8dao@...> wrote:
>
> Is there going to be another run of the ATS or am i pretty much stuck
> homebrewing one if i want one?
>
>
> KD8DAO
>

2335. Re: [AT_Sprint] Re: Another Run of ATS

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-04 21:12:01 UTC
From: Hank Greeb
Topic: 2329 Message: 2335

But, keep your eyes open on this reflector, and on QRP-L. There have
been several offers for the ATS-3b for sale, usually at the same price
that KD1JV was asking. Folks seem to find they don't have time or for
some other reason they decide NOT to build a kit, and put it up for sale.

You have to be observant, because the sales are generally completed very
quickly after one is listed.

I, for one, am content to wait until next summer - right now I have
several other things on the plate.

72/73 de n8xx Hg

Jim Fraser wrote:
> Per one of Steve's recent posts, a third run would likely not be until
> next Summer.
>
> http://groups.yahoo.com/group/AT_Sprint/message/2216
>
> Jim K6JF
>
> --- In AT_Sprint@yahoogroups.com, "Matt" <kd8dao@...> wrote:
>
>> Is there going to be another run of the ATS or am i pretty much stuck homebrewing one if
i want one?
>>
>>
>> KD8DAO

2336. Re: [AT_Sprint] Re: Another Run of ATS

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-04 21:27:22 UTC
From: bgriffin@olp.net
Topic: 2329 Message: 2336

> But, keep your eyes open on this reflector, and on QRP-L. There have
> been several offers for the ATS-3b for sale, usually at the same price
> that KD1JV was asking. Folks seem to find they don't have time or for
> some other reason they decide NOT to build a kit, and put it up for sale.

That is how I got mine and feel VERY lucky to have gotten it, thanks Jack.

I really do feel like a member of an exclusive, tho not discriminatory, club.
Am very grateful to Steve for the work he did putting this kit together.

Bill, ni5x.

2337. Re: [AT_Sprint] Re: Another Run of ATS

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-04 21:47:04 UTC
From: Steven Weber
Topic: 2329 Message: 2337

>Per one of Steve's recent posts, a third run would likely not be until
>next Summer.
>

Indeed, I had planned on waiting until I got back from my AT hike in the spring to do more, but demand for these cute little radios just doesn't seem to want to go away. I guess thats a good thing, hi.

Well, I might start to order parts now and see if I can get a small batch or two out before the end of March.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2338. Re: [AT_Sprint] power plug issues resolved

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-04 22:15:55 UTC
From: john
Topic: 2331 Message: 2338

That plug seems to fit VERY tightly. I have to push more than Im accustomed
to , in order to get it seated.

John K5MO

At 01:01 PM 12/4/2007, shadle wrote:
>Once again, I prove how dopey I can be sometimes.
>
>I met some resistance when shoving the plug in the jack and didn't
>want to press it in further. When I kept on pushing it went in quite
>snugly and everything is good to go now.
>
><sigh>
>
>Sorry to waste the bandwidth.
>
>-john
>
>--- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@...> wrote:
> >
> > --- In AT_Sprint@yahoogroups.com, John Shadle <shadle@> wrote:
> >
> > John,
> >
> > Does this bad connection happen with the rig mounted in a box, or on
> > the unmounted board?
> >
> > If the rig is in a box, make sure that the power plug can go deep
> > enough into the receptacle - the board has to be mounted at the very
> > end of the box for the connectors to mate correctly. The two corners
> > of the power-plug end the board must be rounded to make it possible
> > to fit the board in correctly. The manual describes this.
> >
> > If the poor connection happens on the unmounted board, it indicates a
> > problem inside one of the power connectors - if the connector to the
> > battery looks OK, it might be the receptacle on the board.
> >
> > Be sure the power plug's inserted far enough.
> >
> > Has anyone else seen this problem?
> >
> > KX0R
> > Carey Fuller
> >
> > > Whenever I apply power to the rig by plugging in the 9V battery I

> > have
> > > to twist the plug in the jack and hold it in a certain position
> > before
> > > the rig comes alive. If I let go of the plug and let it sit where
> > it
> > > wants, there is no power. Clearly I can't hold the plug at an angle
> > and
> > > operate the rig...
> > >
> > > Anyone have suggestions as to the remedy to this problem?
> > >
> > > Thanks.
> > > -john W4PAH
> > >
> >
>
>
>
>
>
>Yahoo! Groups Links
>
>
>

2339. Re: Another Run of ATS

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-04 22:35:47 UTC
From: Jim Fraser
Topic: 2329 Message: 2339

Now that the QBSA is 'retired' I am glad I went and picked one up in October to go along with my 3B. I was going to wait until January.

Jim K6JF

--- In AT_Sprint@yahoogroups.com, bgriffin@... wrote:
>
> > But, keep your eyes open on this reflector, and on QRP-L. There have
> > been several offers for the ATS-3b for sale, usually at the same price
> > that KD1JV was asking. Folks seem to find they don't have time or for
> > some other reason they decide NOT to build a kit, and put it up for sale.
>
>
> That is how I got mine and feel VERY lucky to have gotten it, thanks Jack.
>
> I really do feel like a member of an exclusive, tho not discriminatory, club.
> Am very grateful to Steve for the work he did putting this kit together.
>
> Bill, ni5x.
>

2340. Re: a different approach to winding toroids

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-04 22:44:36 UTC
From: Jim Fraser
Topic: 2325 Message: 2340

Good idea, Fred! I think I will try this method with my SoftRock 40/30. I am at the point in assembly right now where it is time to wind the toriods. I had plenty of finger cramps with all those 3B toroids!!

Jim k6jf

--- In AT_Sprint@yahoogroups.com, "Fred Maas" <just.one.hill@...> wrote:
>
> In case this be of interest to anyone, attached is a photo of my method of
> thumbless toroid winding. I mount a pencil in a vise, and put the toroid
> over the vise. I can let go with both hands! I can easily adjust turns. I
> can pull things gently snug easily. My fingers don't cramp. I can drop in
> part way through (write down the count) and finish later, especially nice on
> 80 meter coils.
>
> 72, Fred - kt5x op of W5YA/qrp
>

2341. SMT Soldering

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-04 22:48:50 UTC
From: jess gypin
Topic: 2341 Message: 2341
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2342. Re: Another Run of ATS & QBSA

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-04 22:54:30 UTC
From: radio_kx0r
Topic: 2329 Message: 2342

--- In AT_Sprint@yahoogroups.com, "Jim Fraser" <jimf53@...> wrote:
Jim,

The QBSA delivers a lot of bang for the buck. I'm sure glad I have
one.

KX0R
Carey Fuller

> Now that the QBSA is 'retired' I am glad I went and picked one up
in
> October to go along with my 3B. I was going to wait until January.
>
> Jim K6JF
>
> --- In AT_Sprint@yahoogroups.com, bgriffin@ wrote:
> >
> > > But, keep your eyes open on this reflector, and on QRP-L.
There
> have
> > > been several offers for the ATS-3b for sale, usually at the
same
> price
> > > that KD1JV was asking. Folks seem to find they don't have time
> or for
> > > some other reason they decide NOT to build a kit, and put it up
> for sale.
> >
> >
> > That is how I got mine and feel VERY lucky to have gotten it,
> thanks Jack.
> >
> > I really do feel like a member of an exclusive, tho not
> discriminatory, club.
> > Am very grateful to Steve for the work he did putting this kit
> together.
> >
> > Bill, ni5x.
> >
>

2343. WTB: QBSA kit

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-04 23:01:39 UTC
From: n0mq@sbcglobal.net
Topic: 2343 Message: 2343

Will got my ATS-3b and was waiting to buy the QBSA kit. Darn gone.... If anyone has one that they want to sell, let me know
73
Gene
n0mq

2344. Re: SMT Soldering

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-04 23:07:11 UTC
From: radio_kx0r
Topic: 2341 Message: 2344

--- In AT_Sprint@yahoogroups.com, "jess gypin" <ontarget1911@...> wrote:

Jess,

Much has been written on this group site about the various methods. I built the ATS-3A using a pointed soldering tip, and I built the ATS-3B using Cash Olson's solder paste, candle warmer plate, and a hot air tool (Hobby Lobby embossing tool). Both methods work fine. Neither is easy.

Search this site to read our previous posts. I'm not going to say all the stuff I said earlier, since it's easy to find. Search for "hot air", "Cash Olson", "candle warmer", "doofus", etc., and you'l find plenty to read from many of us.

No matter how you do it, it's a great radio once you get it all done!!

KX0R
Carey Fuller

> I have the AT-3 kit and am really confused about the soldering methods. The
> SMT/Solder paste method looks really easy and intriqing, but I have never
> done it before. The prospect of sodering all of those itty bitty parts a
> piece at a time does not thrill me either. Has anyone tried the SMT/Solder
> method that also has done it the old manual way? I am all for learning a new
> way to do things as long as there is not much risk of screwing it up or
> damaging the PC board. What do you all think?
>
> Jess
>

2345. Re: [AT_Sprint] SMT Soldering

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-04 23:09:04 UTC
From: Mark Brueggemann
Topic: 2341 Message: 2345

--- jess gypin <ontarget1911@...> wrote:

> am really confused about the soldering methods. The
> SMT/Solder paste method looks really easy and intriqing,
> but I have never done it before.

Why don't you practice on something first? Get a PWB out of
a junk piece of electronics (like an old ISA bus card) and
roast it, shake it, bake it and see where the boundaries are.
You'll be suprised at the amount of latitude there is with this
process. Even some True Curmudgeons I know (W9YA) can do it,
anyone can.

> The prospect of sodering all of those itty bitty parts a
> piece at a time does not thrill me either.

Once you get in the groove you can do several a minute.

> Has anyone tried the SMT/Solder method that also has done
> it the old manual way?

Last year I did a build for a customer that had 4800 parts,
all hand soldered (the layout precluded automated assembly).
Sure, you can do it. IIRC I spent about 6 hours putting my
ATS3A kit together (1 week of lunch hours).

> I am all for learning a new way to do things as long as
> there is not much risk of screwing it up

So take the risk out and practice on something else first.

Mark K5LXP
Albuquerque, NM

2346. Re: [AT_Sprint] Re: Another Run of ATS

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-04 23:14:13 UTC
From: Mark Brueggemann
Topic: 2329 Message: 2346

Well, since the only "proprietary" part is the PCB, if
Steve would be willing he could order up a batch of those
to sell and let the builders source their own parts, saving
him the time/expense of kitting them up. Some enterprising
individuals could sell a kit of parts separately, and yet
others could offer to program up a batch of micro's. All the
doc's are done, partlists, firmware, etc, so it's just a matter
of gathering up the bits to make more.

Mark K5LXP
Albuquerque, NM

2347. Re: [AT_Sprint] WTB: QBSA kit

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-04 23:36:17 UTC
From: Kurt Savegnago
Topic: 2343 Message: 2347

--- n0mq@... wrote:

> Will got my ATS-3b and was waiting to buy the QBSA
> kit. Darn gone.... If
> anyone has one that they want to sell, let me know
> 73
> Gene
> n0mq

When Steve comes out with a kit, one has to jump at it
or lose out. I was interested in the ATS3 and had to
wait awhile for the 3A. Jumped on board for the 3B
right away. Gotta be quick and can't procrastinate.

Kurt KC9LDH

Slackware user since 1994

2348. Re: [AT_Sprint] WTB: QBSA kit

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-04 23:44:58 UTC
From: John A. Evans - N0HJ
Topic: 2343 Message: 2348

This was even worse before the ATS-xx days. Steve would do one run of kits and that was it. He might do a Mark II version but if mym memory serves me, he never did a second run of the same kit before the ATS rigs. Now, this may be due to more demand these days for the popular ATS rigs - it certainly isn't due to a jump in quality - all of his designs are really great !!

72 - john - n0hj

Kurt Savegnago wrote:
>
>
> When Steve comes out with a kit, one has to jump at it
> or lose out.
>

2349. Re: [AT_Sprint] SMT Soldering

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-04 23:46:44 UTC
From: Gil Stacy
Topic: 2341 Message: 2349
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2350. Re: [AT_Sprint] Re: a different approach to winding toroids

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-05 00:17:03 UTC
From: Fred Maas
Topic: 2325 Message: 2350
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2351. Re: SMT Soldering

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-05 00:18:51 UTC
From: Jack B.
Topic: 2341 Message: 2351

I very much plan on using the Cash Olsen method. I've already done a practice kit (a 30m NorCal Tuner Upper) and the results were so much better than the 20m Tuner Upper I built one component at a time that I would even venture to say I now PREFER SMT over through-hole because this method works so well.

Happily, American Ingenuity is alive and well and Cash's method is proof of this (as are the multitude of great sites Gil included below).

I dare you, no I *DOUBLE DOG DARE* you all to try Cash's Method as it really works well. Before this, I simply dreaded soldering SMT parts. I have the equipment, but it was still a bit frustrating to spend so much time working on such tiny stuff (I would have become a jeweler or a surgeon otherwise).

For my builds I set my electric skillet to just below 200 degrees which shortens the time I have to spend getting the paste to flow, but it lengthens the time to cool off.

It would be interesting to clock the different methods and error rates.

72/73!
Jack, K6JEB
www.k6jeb.com

--- In AT_Sprint@yahoogroups.com, "Gil Stacy" <gilstacy@...> wrote:
>
> Iron method:
> Advantage: one part at a time, you set the pace. Fast learning curve.
> Disaster potential low.
> Disadvantage: one part at a time.
>
> Cash Olson method:
> Advantage: fast, neat method. Disaster potential: pyschological. Fear of
> blowing all parts in a split second into the edge of pan buried under a
> Pompei-sized heap of solder slag. Reality: not gonna happen unless you use
> Sears leafblower to provide air flow.
>
> Hybrid of the two above:
> Here are three methods of making a small reflow tool out of a solder iron or
> sucker and an aquarium air pump. Paste as many parts as you want to do at a
> time, and use one of these tools to provide the hot air flow one

part at a
> time.
>
>
> http://circuitguy.com/projects/smd_solder/
>
http://www.engadget.com/2006/03/07/how-to-make-a-surface-mount-soldering-iron/
>
>
http://www.usbmicro.com/odn/documents/ACC430664DD26DDE5986574AAA62775FDFF29EA1.html
> And who said that American Ingenuity was dead??
>
> I've tried the iron and Cash Olson method and both work fine. If I
knew I
> would only do one smd job, I'd probably pick the iron method because
of the
> pyschological safety net; it's closer to what I've done numerous times
> before with leaded components.
>
> 73 Gil NN4CW
>

2352. RE: [AT_Sprint] SMT Soldering

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-05 00:24:17 UTC
From: Dale Putnam
Topic: 2341 Message: 2352

Well, alrighty then, my source of solder paste isn't any longer. Any suggestions?--...
...--Dale - WC7S in Wy

_____
Share life as it happens with the new Windows Live.Download today it's FREE!
http://www.windowslive.com/share.html?ocid=TXT_TAGLM_Wave2_sharelife_112007

2353. Re: [AT_Sprint] Re: SMT Soldering

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-05 00:27:44 UTC
From: jess gypin
Topic: 2341 Message: 2353
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2354. Re: [AT_Sprint] SMT Soldering

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-05 00:30:58 UTC
From: Jim Miller
Topic: 2341 Message: 2354

http://www.zianet.com/erg/SMT_Soldering.html

jim
----- Original Message -----
From: Dale Putnam
To: at_sprint@yahoogroups.com
Sent: Tuesday, December 04, 2007 7:24 PM
Subject: RE: [AT_Sprint] SMT Soldering

Well, alrighty then, my source of solder paste isn't any longer. Any suggestions?
--... ...--
Dale - WC7S in Wy

Share life as it happens with the new Windows Live. Share now!

No virus found in this incoming message.
Checked by AVG Free Edition.
Version: 7.5.503 / Virus Database: 269.16.13/1169 - Release Date: 12/3/2007 10:56 PM

2355. QRP BB Adapter (ISO Elmer)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-05 01:12:34 UTC
From: kc7fys
Topic: 2343 Message: 2355

I've been exchanging notes on flickr with another Bee-Builder over here in JA1. He has posted some intriguing designs both in the photo section of this forum, and on Flickr (which I can't figure out why Yahoo hasn't merged--flickr is so robust for commenting and discussing photos of QRP projects).

In particular my eye was caught by this "BB Adapter". The excellent photos do tell a story, but could another of you who is familiar with what this is describe what you see in the photo: <http://ph.groups.yahoo.com/group/AT_Sprint/photos/view/8fbd?b=10&m=f&o=0> more fully? What is it, and why/how might I make my own?
Thanks to JN1GLB for excellent explanatory photos,
Jonathan
PS. If you're hip to the flickr thing, comment over there under the appropriate photo. <http://www.flickr.com/photos/21084785@N06/>

2356. Re: [AT_Sprint] Re: SMT Soldering

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-05 01:19:29 UTC
From: john
Topic: 2341 Message: 2356

I had the same questions when I was faced with building mine, and did it by hand, since I had no experience with reflow methods and didnt want to experiment on a 190$ kit! It was actually fun to do the soldering by hand, but I think Im going to experiment with some junk board and an old toaster oven I have.... I need to find a decent thermometer that reads in the appropriate range...anyone found a good source?

John K5MO

2357. RE: [AT_Sprint] Re: SMT Soldering

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-05 02:15:00 UTC
From: Ken Lotts
Topic: 2341 Message: 2357

I am doing my board the traditional (one piece at a time with a Duffus) way and am enjoying every minute. I have no regrets.
Here are some early photos:
http://www.flickr.com/photos/lotts-family/sets/72157602770278899/show/

Ken Lotts
aa7jc

-----Original Message-----
From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com]On Behalf Of john
Sent: Tuesday, December 04, 2007 6:19 PM
To: AT_Sprint@yahoogroups.com
Cc: jess gypin
Subject: Re: [AT_Sprint] Re: SMT Soldering

I had the same questions when I was faced with building mine, and did it by hand, since I had no experience with reflow methods and didnt want to experiment on a 190$ kit! It was actually fun to do the soldering by hand, but I think Im going to experiment with some junk board and an old toaster oven I have.... I need to find a decent thermometer that reads in the appropriate range...anyone found a good source?

John K5MO

2358. Flickr ATS group formed

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-05 02:22:40 UTC
From: kc7fys
Topic: 2358 Message: 2358

This Yahoo group is completely sufficient for exchanging ideas and tweaks on the ATS lineup of QRP rigs. I have, on occasion, wished I could comment on photos or ask, "What's that thing you soldered on there, buddy?" --when looking at your photos in the 'photo' section of this group.
For this reason, I have taken the liberty of instituting "ATS-QRP" on Flickr. For those of you who are familiar with Flickr and use it, there is a very robust show-and-tell exchange of ideas that is possible when notation and commenting on photos occurs.
The URL of this group is: <http://www.flickr.com/groups/ats_qrp/> if you want to sail on in and see what's there. If you have ATS photos on flickr, you can add them, browse others, comment, cajole, argue, whatever--while looking at the equipment in question.
Please disregard this notice if you're rolling your eyes, saying, "Oh, geez, not another offshoot...." This YahooGroup forum is completely adequate for what it is, and I mean no distraction whatsoever from the present conversation here.
Thanks,
Jonathan KC7FYS/7J1AWL

2359. Paddle-in-a-plug ???

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-05 03:24:17 UTC
From: Fred Maas
Topic: 2359 Message: 2359
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2360. Fun radio

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-05 03:53:02 UTC
From: Bill
Topic: 2360 Message: 2360

A friend of mine and I always talk about which radios we have owned that were fun. Some radios just have fun built in. The Index Labs QRP+ was a fun radio. Something about the few buttons, big tuning knob and shape of it just made it fun to operate.

The ATS3B is a fun radio. The simplicity, the 4 buttons, the one digit display, and you get to build it too. Add to that the great receiver and all the features you really need in a small package.

I have just been amazed with this radio since I finished it. The other kd1jv design I added on also helps the fun of my configuration. I combined the radio with the alt tuner, the original style with the jumpers, in one tin. There are photos of it in the photo section of the group site under my call sign.

Bill, ni5x

2361. Re: [AT_Sprint] Fun radio

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-05 04:26:35 UTC
From: jess gypin
Topic: 2360 Message: 2361
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2362. FT37-43 toroid needed.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-05 04:35:08 UTC
From: kc7fys
Topic: 2362 Message: 2362

Howdy,
I have a Tenna Dipper that I put together a few months ago, with the wrong toroid. The kitters said they'd send me one, but it never arrived. Could one of you, if you have it laying around, send me a single 37-43 so that I can bring my Dipper up to snuff? I can reciprocate with a coupla green stamps, as they say. JA1 QTH here. I just can't find one in Akihabara.
Thx,
Jonathan

2363. Re: FT37-43 toroid needed.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-05 06:30:58 UTC
From: eplerkeppler
Topic: 2362 Message: 2363

Hey Jonathan,

I know what it's like to look at ordering one toroid plus 6 to 8 dollars for shipping and handling. I guess we all do.

I have a few and will gladly mail one to you.

Are you in the United States or Japan or something? Where is Akihabara anyway? Oh I see it is Japan from wikipedia.

Ok give me your address.

This is just the core by the way. You have wire?

I myself am looking for a few toroid cores. (At the risk of turning the forum into a toroid exchange group ...) If anyone has a T130-6 and/or T130-2, I could use one of each. I'll pay you the few dollars plus what ever envelope shipping is.

-- Charles McMurrough

--- In AT_Sprint@yahoogroups.com, "kc7fys" <kc7fys@...> wrote:
>
> Howdy,
> I have a Tenna Dipper that I put together a few months ago, with the
> wrong toroid. The kitters said they'd send me one, but it never
> arrived. Could one of you, if you have it laying around, send me a
> single 37-43 so that I can bring my Dipper up to snuff? I can
> reciprocate with a coupla green stamps, as they say. JA1 QTH here. I
> just can't find one in Akihabara.
> Thx,
> Jonathan
>

2364. Re: [SPAM][AT_Sprint] FT37-43 toroid needed.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-05 11:57:06 UTC
From: n0mq@sbcglobal.net
Topic: 2364 Message: 2364

Jonathan:
Send me your address again and we will get another one sent to you. We did send you a replacement but looks like it did not get to you.
n0mq@...

73
Gene
n0mq

----- Original Message -----
From: kc7fys
To: AT_Sprint@yahoogroups.com
Sent: Tuesday, December 04, 2007 10:35 PM
Subject: [SPAM][AT_Sprint] FT37-43 toroid needed.

Howdy,
I have a Tenna Dipper that I put together a few months ago, with the wrong toroid. The kitters said they'd send me one, but it never arrived. Could one of you, if you have it laying around, send me a single 37-43 so that I can bring my Dipper up to snuff? I can reciprocate with a coupla green stamps, as they say. JA1 QTH here. I just can't find one in Akihabara.
Thx,
Jonathan

2365. Re: Fun radio

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-05 22:41:40 UTC
From: Jack B.
Topic: 2360 Message: 2365

As much of a hassle as it was, I have to say my HeathKit HW-101 I had as a Novice comes to mind as a fun radio. Memories of setting it up in a tent in the back yard for contests as a teenager. Doing mods on the board to help improve received audio, as well as dropping hot lead into the knob to give it a weighted feeling.

I also have fond memories of building a Tuna Tin II completely from scratch (I scrounged or made all the parts, no kit then). I think seeing the look on my High School Electronics Teacher's face when I got a reply back to a CQ (and the resulting A I received) were not only fun, but inspiring.

Conversely, I would say I have also had experiences with no-fun radios. One that comes to mind is the PRC-77 I would often get stuck carrying while I was in the army infantry. But that's another story. :)

Of late, hands-down the Fun Radio award goes to my current construction of the ATS-3B. As many of you probably know, I've been doing one band filter board per even (mostly it's just winding three toroids and mounting a few through-hole components, I mounted the SMT component on the five boards (there is no resistor for the 80m board) at once with Cash Olsen's hot air method (it's not just painless, it's fun!).

In fact, last night after I did my nightly ATS-3B filter board build, I rather quickly mounted and soldered SMT parts to both sides of an FCC-2 just for fun. So it's not a radio (yet) but it was fun!

72/73!
Jack

--- In AT_Sprint@yahoogroups.com, "Bill" <bgriffin@...> wrote:
>
> A friend of mine and I always talk about which radios
> we have owned that were fun. Some radios just have fun
> built in. The Index Labs QRP+ was a fun radio. Something
> about the few buttons, big tuning knob and shape of it
> just made it fun to operate.
>
> The ATS3B is a fun radio. The simplicity, the 4 buttons, the
> one digit display, and you get to build it too. Add to that
> the great receiver and all the features you really need in a
> small package.
>
> I have just been amazed with this radio since I finished it.
> The other kd1jv design I added on also helps the fun of

> my configuration. I combined the radio with the alt tuner,
> the original style with the jumpers, in one tin. There are
> photos of it in the photo section of the group site under
> my call sign.
>
> Bill, ni5x
>

2366. Re: Fun radio

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-06 00:39:50 UTC
From: Jim Fraser
Topic: 2360 Message: 2366

My first rig was a second-hand HW-16 that I had a lot of fun with for about a year as a Novice/General. Then during a semester break from college back in Jan '72 I built an HW-101 and proceeded to operated it for over 20 years before selling it off.

Say Jack, are you planning to use your FCC-1/FCC-2 with your 3B?? I would be interested in hearing how it works out.

Jim k6jf

--- In AT_Sprint@yahoogroups.com, "Jack B." <k6jeb@...> wrote:
>
> As much of a hassle as it was, I have to say my HeathKit HW-101 I had
> as a Novice comes to mind as a fun radio. Memories of setting it up
> in a tent in the back yard for contests as a teenager. Doing mods on
> the board to help improve received audio, as well as dropping hot lead
> into the knob to give it a weighted feeling.
>
> I also have fond memories of building a Tuna Tin II completely from
> scratch (I scrounged or made all the parts, no kit then). I think
> seeing the look on my High School Electronics Teacher's face when I
> got a reply back to a CQ (and the resulting A I received) were not
> only fun, but inspiring.
>
> Conversely, I would say I have also had experiences with no-fun
> radios. One that comes to mind is the PRC-77 I would often get stuck
> carrying while I was in the army infantry. But that's another story. :)
>
> Of late, hands-down the Fun Radio award goes to my current
> construction of the ATS-3B. As many of you probably know, I've been
> doing one band filter board per even (mostly it's just winding three
> toroids and mounting a few through-hole components, I mounted the SMT
> component on the five boards (there is no resistor for the 80m board)
> at once with Cash Olsen's hot air method (it's not just painless, it's
> fun!).
>
> In fact, last night after I did my nightly ATS-3B filter board build,

> I rather quickly mounted and soldered SMT parts to both sides of an
> FCC-2 just for fun. So it's not a radio (yet) but it was fun!
>
> 72/73!
> Jack
>
> --- In AT_Sprint@yahoogroups.com, "Bill" <bgriffin@> wrote:
> >
> > A friend of mine and I always talk about which radios
> > we have owned that were fun. Some radios just have fun
> > built in. The Index Labs QRP+ was a fun radio. Something
> > about the few buttons, big tuning knob and shape of it
> > just made it fun to operate.
> >
> > The ATS3B is a fun radio. The simplicity, the 4 buttons, the
> > one digit display, and you get to build it too. Add to that
> > the great receiver and all the features you really need in a
> > small package.
> >
> > I have just been amazed with this radio since I finished it.
> > The other kd1jv design I added on also helps the fun of
> > my configuration. I combined the radio with the alt tuner,
> > the original style with the jumpers, in one tin. There are
> > photos of it in the photo section of the group site under
> > my call sign.
> >
> > Bill, ni5x
> >
>

2367. psk31 problem

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-06 04:20:38 UTC
From: Bill
Topic: 2367 Message: 2367

The rig started out working fine but then
would not stop transmitting after sending psk.
Even using the transmit button or sending
$rx. I tried even editing a macro so that all
it was sendng was the switch to receive macro.
Sending seems to work fine every time, but I
have to pull the power to kill the transmit.

Any ideas from anyone?

thanks,
Bill, ni5x.

2368. qfox] 40 Meter Fox Hunt - Thursday December 6, Local

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-06 13:16:58 UTC
From: Dale Putnam
Topic: 2368 Message: 2368

Hello Hunter Hounds,I will be one of your Foxes for this week's 40M FOXhunt. I've gotten my antennas repaired from the 70 + mph winds of the last week or so.and... I'll be listening for you as I poke my furry tail up... somewhere in the 40 acre wood, between the .030 and .050 trees.I may start out simplex, so listen for the ""up" or not then listen for the hounds too..However, IF I can hear more than just a couple hounds at a time, be ready for "up" to occur.The hunt starts at 0200z on Friday, December 7th. That is Thursdayevening, local.I'm located in the Wild West, where the pavement ends, and the West begins,Or.. as some have said of late, where the winds never stops.And I am doing my best to slow down the wind with 2 360 foot long phased arrays,and 2 verticals, and a simple dipole. One of them will hear you... I hope.Come early and stay late... we'll have a ton of fun, Chasing through the sage.Handing out pelts to every waggin tail to be heard.Y'all come, so ya kin hear.--... ...--Dale - WC7S in Wy_____Connect and share in new ways with Windows Live.http://www.windowslive.com/connect.html?ocid=TXT_TAGLM_Wave2_newways_112007

_____
Your smile counts. The more smiles you share, the more we donate. Join in. www.windowslive.com/smile?ocid=TXT_TAGLM_Wave2_oprsmilewlhmtagline

2369. FS: ATS-3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-06 14:25:40 UTC
From: w1mt
Topic: 2369 Message: 2369

Since I have several ATS rigs and can't use them all so I am selling my ATS-3A. Pics are in the photos section. It currently has my version of the firmware loaded. It's in a olive green painted Altoids tin, calibrated and ready to put on the air. $165 shipped.

Inquire direct.

-mike/w1mt

2370. Re: [AT_Sprint] psk31 problem

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-06 16:32:50 UTC
From: Steven Weber
Topic: 2367 Message: 2370

>The rig started out working fine but then
>would not stop transmitting after sending psk.
>Even using the transmit button or sending
>$rx. I tried even editing a macro so that all

Bill,

I've been in contact with Vojtech the last few days working on this very same issue. The problem apparently is caused by a voltage spike generated by the sound card when the output is turned off and this confuses the decoder in the ATS3B. I had no such issue running with a Pocket PC and only just the other day tried using the desktop version.

Here is the fix Vojtech just sent me. I tried it and it works. Now the rig goes back to receive with no problem and the "test" button in the setup menu works, which also wasn't working before.

****

Please stop PocketDigi, start regedit, go to
[HKEY_CURRENT_USER\Software\OK1IAK\PocketDigi\TrxCtrl]
Now you will see following values:
"Type"=dword:00000004
"COM"=dword:00000003
"Ats3FreqOffset"=dword:00002530
"Ats3Preamble"=dword:000001f4
"Ats3Postamble"=dword:00000014

COM and Ats3FreqOffset will probably have different values from this list.

Now copy the value from Ats3Preamble to Ats3Postamble to make it 63msec long.
Launch PocketDigi and try whether the Test button works.
If not, stop PocketDigi, start regedit, make the postamble 2x longer, start PocketDigi and try it agan.

****

My rig started working with the Ats3Postamble set to 01f4.

It took me a minute to figure out how to edit the value. Double click on Ats3Postamble in the list and a value edit dialog window will open.

Open regedit by going to >START> RUN and type in regedit. You must be an administrator to edit this.

Vojtech says he will have a new desktop version of Pocketdigi out soon, where the pre and postamble values can be edited direct from the program and has a few new features like sound card clock calibration.

I tried running Pocketdigi on an old Win98 PC and the ATS-3B would not respond at all to it. I'll try playing with the pre and postamble times and see if that will make it work.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2371. Re: [AT_Sprint] psk31 problem

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-06 17:43:54 UTC
From: bgriffin@olp.net
Topic: 2367 Message: 2371

Steve,
Thanks for the quick reply and fix on this.
Just one more reason to like this radio and
appreciate your work. I will have to wait till
I get home this evening to try it out.

Did you happen to look at the photos under my call
sign for this group? I used another of your designs
to pair up the the ATS3B, so far seems to work very
well and easier to carry. Not exactly low on weight
but I am too old for backpacking anymore anyway. :).

Bill, ni5x.

2372. Re: [AT_Sprint] psk31 problem

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-06 19:32:45 UTC
From: Steven Weber
Topic: 2367 Message: 2372

I got my old Gateway Win98 PC to work with Pocketdigi/ATS-3B by reducing the preamble time quite a bit. From 1f4 to e4. So, it seems tweaking the preamble and postable times constants to match the characteristics of the particular sound card being used is important to getting it to work.

I'm glad it now works with the Gateway, as it is located next to my radios and will much more convent to use than the Pocket PC.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2373. Re: [AT_Sprint] psk31 problem

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-06 20:09:02 UTC
From: Steven Weber
Topic: 2367 Message: 2373

>Thanks for the quick reply and fix on this.
>Just one more reason to like this radio and
>appreciate your work. I will have to wait till
>I get home this evening to try it out.
>

You just happend to have good timing with this question, as Vojtech had
just given me the solution this morning!

>Did you happen to look at the photos under my call
>sign for this group?

No, since I'm on dial up with a pay-per-minute phone line at the moment, I
only got to the web when I absolutely have to. But I'm sure its quite nice :-)

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2374. RE: Found a QBSA kit

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-07 00:22:51 UTC
From: n0mq@sbcglobal.net
Topic: 2374 Message: 2374

Thanks Alan for selling me the kit and thanks to the group for the bandwidth.
73
Gene
n0mq

2375. Re: Fun radio

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-07 00:29:56 UTC
From: Jack B.
Topic: 2360 Message: 2375

Hi Jim,
I read with interest the piece on using the FCC-1 with the ATS-3(x) but initially I plan to use them separate. I may however make the connection between them modular. The FCC-1 is a bit large for an Altoids tin, but it would be cool to have some sort of 'stacking' modularity.

I'm also thinking about building my ATS-3A in a more 'portable-fixed' configuration, which would definitely include the FCC-1. I'm still trying to figure out how I would use the FCC-2 with the ATS-3. I don't know that I could use it to key RTTY and there's already a VFO in the ATS-3. But I love the idea of the FCC-1+ATS-3!

One thing that used to be a pastime as a teenager was scavenging the many tv's on the curb (seemed like every week another would appear somewhere in our neighborhood in the early 80's). We'd take the vacuum tubes to the local shop with a tube tester and then look up the substitutions. I seem to recall a few tubes in the HW-101 were easily substituted by others found in virtually every TV at that time.

Also it was a blast unwinding the CRT coils from one end of the neighborhood park to the other several times. At the time I thought that if you just got enough wire in the air, you could work the world. I was mostly correct. :)

I will add that lately, I've been having a blast with my FT-857D which is small enough for HF Packing while having all the features of larger and more expensive rigs. Some folks are confused/turned-off my the menu system. But with few exceptions, most of them are 'set it and forget it' adjustments. As most QRPers are aware, you really don't need a lot of bells and whistles to have fun. OK, maybe sometimes an extra bell or whistle helps . . . I just got my 500hz CW and 2300hz SSB W4RT Collins filters for my FT-857D yesterday and talk about a HUGE improvement! My IF shift is actually useful now! DSP now ***REALLY*** cuts through.

Blah blah blah

Finally, tonight I finish the sixth band filter board for my ATS-3B. It's been quite easy going. My plan is to mount the SMT components on the main board over the weekend and then finish up at least the build phase over next week. So far I've spent less than six hours (that includes breaks and taking photos along the way) which is mostly winding toroids.

If you put off building your ATS-3 because you dreaded winding toroids or mounting SMT parts; take my word for it, you'll be glad you started

because your gumption will increase with each step you complete.

72/73!
Jack, K6JEB
www.k6jeb.com

PS - I put up some more photos of building the filter boards on my web site.

--- In AT_Sprint@yahoogroups.com, "Jim Fraser" <jimf53@...> wrote:
>
> My first rig was a second-hand HW-16 that I had a lot of fun with for
> about a year as a Novice/General. Then during a semester break from
> college back in Jan '72 I built an HW-101 and proceeded to operated
> it for over 20 years before selling it off.
>
> Say Jack, are you planning to use your FCC-1/FCC-2 with your 3B?? I
> would be interested in hearing how it works out.
>
> Jim k6jf
>
>
> --- In AT_Sprint@yahoogroups.com, "Jack B." <k6jeb@> wrote:
> >
> > As much of a hassle as it was, I have to say my HeathKit HW-101 I
> had
> > as a Novice comes to mind as a fun radio. Memories of setting it up
> > in a tent in the back yard for contests as a teenager. Doing mods
> on
> > the board to help improve received audio, as well as dropping hot
> lead
> > into the knob to give it a weighted feeling.
> >
> > I also have fond memories of building a Tuna Tin II completely from
> > scratch (I scrounged or made all the parts, no kit then). I think
> > seeing the look on my High School Electronics Teacher's face when I
> > got a reply back to a CQ (and the resulting A I received) were not
> > only fun, but inspiring.
> >
> > Conversely, I would say I have also had experiences with no-fun
> > radios. One that comes to mind is the PRC-77 I would often get
> stuck
> > carrying while I was in the army infantry. But that's another
> story. :)
> >
> > Of late, hands-down the Fun Radio award goes to my current
> > construction of the ATS-3B. As many of you probably know, I've been
> > doing one band filter board per even (mostly it's just winding three
> > toroids and mounting a few through-hole components, I mounted the
> SMT
> > component on the five boards (there is no resistor for the 80m

> board)
> > at once with Cash Olsen's hot air method (it's not just painless,
> it's
> > fun!).
> >
> > In fact, last night after I did my nightly ATS-3B filter board
> build,
> > I rather quickly mounted and soldered SMT parts to both sides of an
> > FCC-2 just for fun. So it's not a radio (yet) but it was fun!
> >
> > 72/73!
> > Jack
> >
> > --- In AT_Sprint@yahoogroups.com, "Bill" <bgriffin@> wrote:
> > >
> > > A friend of mine and I always talk about which radios
> > > we have owned that were fun. Some radios just have fun
> > > built in. The Index Labs QRP+ was a fun radio. Something
> > > about the few buttons, big tuning knob and shape of it
> > > just made it fun to operate.
> > >
> > > The ATS3B is a fun radio. The simplicity, the 4 buttons, the
> > > one digit display, and you get to build it too. Add to that
> > > the great receiver and all the features you really need in a
> > > small package.
> > >
> > > I have just been amazed with this radio since I finished it.
> > > The other kd1jv design I added on also helps the fun of
> > > my configuration. I combined the radio with the alt tuner,
> > > the original style with the jumpers, in one tin. There are
> > > photos of it in the photo section of the group site under
> > > my call sign.
> > >
> > > Bill, ni5x
> > >
> >
>

2376. Re: Fun radio

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-07 01:25:40 UTC
From: kc7fys
Topic: 2360 Message: 2376

Jack, I put a recommendation to visit your page on the Flickr
http://www.flickr.com/groups/ats_qrp/ group. That's a very nice
informative page.
Jonathan

2377. Yeah, I know it's a longshot.....

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-07 01:27:37 UTC
From: John Harper
Topic: 2377 Message: 2377

Anyone have an unbuilt ATS-3B for sale?

Thanks and 73,

John Harper AE5X
Kingwood, Texas
http://www.ae5x.com

2378. Re: [AT_Sprint] FS: ATS-3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-07 03:18:17 UTC
From: jess gypin
Topic: 2369 Message: 2378
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2379. Hot Air SMT Soldering on Double-Sided Circuits Boards your thoughts?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-07 07:42:31 UTC
From: Jack B.
Topic: 2379 Message: 2379

I'm guessing it would be preferable to re-heat components as little as possible. So as I look at the main board of the ATS-3B, I wonder which side to do first? I'm leaning toward doing the Front side (the side with the LED readout) since fewer parts would later sit against the pre-warming surface when I do the Back side.

For those who have used Cash Olsen's method, how did you go about it? Front side first? Back side first?

Would having more components pressing against the pre-warming surface (if you used a pre-warming at all) actually HELP because of increased contact?

Finally did you do the active components last? First?

Lost Q Signal - QRD

QRD - 'the place is going to the dogs'; pets over-running the shack; alternately, using pets to carry your gear while out in the field; slang: 'he QRD'ed fishbowl as a dummy load.'

2380. Re:[AT_Sprint] Hot Air SMT Sold ering on Double-Sided Circuits Boards your thoughts?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-07 07:44:21 UTC
From: J. Haynes
Topic: 2380 Message: 2380

I found prewarming unnecessary.

2381. Re: FS: ATS-3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-07 11:37:34 UTC
From: w1mt
Topic: 2369 Message: 2381

ATS-3A is sold.

-mike/w1mt

2382. Re: a different approach to winding toroids

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-07 15:57:45 UTC
From: aarhus_ca
Topic: 2325 Message: 2382

Hi Fred

As your picture does not come through Yahoo - could you please post it in the 'Photos' folder; or email it to me?
The verbal description doesn't work for me ....

Thanks

John VE3NFK

--- In AT_Sprint@yahoogroups.com, "Fred Maas" <just.one.hill@...> wrote:
>
> In case this be of interest to anyone, attached is a photo of my method of
> thumbless toroid winding. I mount a pencil in a vise, and put the toroid
> over the vise. I can let go with both hands! I can easily adjust turns. I
> can pull things gently snug easily. My fingers don't cramp. I can drop in
> part way through (write down the count) and finish later, especially nice on
> 80 meter coils.
>
> 72, Fred - kt5x op of W5YA/qrp
>

2383. Re: Hot Air SMT Soldering on Double-Sided Circuits Boards your thoughts?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-07 17:13:11 UTC
From: radio_kx0r
Topic: 2379 Message: 2383

--- In AT_Sprint@yahoogroups.com, "Jack B." <k6jeb@...> wrote:

Jack,

I used the Cash Olson method, and here are my suggestions:

1) Place and reflow your parts on the side with the fewer number of parts first.

2) Use a preheat device like a hot plate, candle warmer, or skillet. It will be touching the side of the board with no parts when you solder the other side. Temperature of the plate should be high enough to make water drops boil and just dance - no hotter. You risk board damage if you use too high a temperature for preheat. No preheat requires hotter air and makes the thermal profile worse.

3) In previous posts several of us have described our setups in detail. I have photos of my candle warmer preheater with heat spreader posted in the PHOTOS section on this site. I wrote this up in detail. Please search our previous posts, and you'll find a lot of discussion of just what you're asking about.

4) Solder the LED readout after all the other parts are installed. It's easy to hand-solder, and it's best done at the end of the game.

5) You don't want your already-soldered components to touch the prewarming surface directly. It's easy to support the board with coins or washers at the corners, so the parts don't quite touch. Most of the heat from the surface rises through the board anyhow.

6) If you use the hot air tool correctly on the upper side of the board, the parts on the reverse side won't reflow. One reason you don't want those parts touching anything is that if they DO reflow, you don't want any force on them that would cause them to shift. Surface tension of the melted solder will hold parts in position, even upside down, as long as nothing touches them. If your heat is OK on both sides, melting of the underside won't happen.

7) For each side, I placed most of the parts with solder paste, and then reflowed that side with hot air. On the side with the most parts, it gets tough because there are so many parts; it's easy to slip and mess up a couple. It isn't too bad if you're careful. You should complete each cycle of placing parts and reflowing them. It isn't a good idea to leave the parts sitting in paste for hours - it dries out -you need to get them melted soon after they're placed. So allow enough time to place your parts and reflow them. Others have

suggested soldering the parts in groups, which means some go through more than one heat cycle. If you do it that way, I'd suggest starting with the passive parts, resistors and capacitors, so that the IC's are in the last wave. The IC's should go through just one heat cycle, if possible. Be sure you get all your IC's oriented right - triple check them and READ THE MANUAL - study Steve's pictures.

8) Some parts should NOT be soldered with hot air. I suggest you solder all connectors, the socket strip, all electrolytic caps, trimmer CT1, L3, the display, all crystals, D3, the pushbuttons, the clock oscillator, and the three 2N7000 mosfets by hand, per the manual. These all go on after the SMT parts are done.

9) Stick with the manual and the order for the parts as much as possible - this helps avoid mixups. I think the color drawings are very helpful.

10) I would ignore people who suggest toaster ovens and the like. While they may melt solder, the 1500 watt elements and high thermal mass are not what we want for the thermal profiles we're trying to match. Toaster ovens create a lot of infrared energy, which may overheat some black parts, but not the solder, unlike the hot air. Using a toaster oven is like using a sledge hammer to crack a peanut. Even if you use a thermometer in one, you may be misled by the concentration of infrared energy.

11) The beauty of the hot air tool (320W embossing tool) is that you can watch what's happening - you see the solder paste changing and then melting - you know when you're hot enough - you have immediate visual feedback on what you're doing - and you can avoid getting things too hot before massive damage occurs. Don't get the hot air tool too close or get in a hurry - spend at least a 2 or 3 minutes bringing the temperature of the parts up slowly before getting in closer for the peak of the melt cycle. You can paint the hot air over the board so you go slowly from one zone to the next. You won't have it all molten at one time with this tool.

The complete soldering of all parts on the denser side takes several minutes after you begin with the hot air. Gradually raise the tool and keep painting the air once you're sure you've reflowed all parts - you want to have a gradual drop in temperature as part of that thermal profile.

12) My candle warmer with 1/4" thick aluminum heat spreader has so much thermal mass that I chose to remove the board from the little hot plate a few minutes after I was finished with the hot air. Avoid using too long a duration of preheat and postheat. My candle warmer and spreader take so long to fully warm up, that I compromised and put the board on the preheat surface only after it had heated up. To avoid a thermal shock, I used spacers to lift the board at first; after a few minutes, I removed them and let the board sit on the

aluminum, which was probably at about 250 degrees F. After maybe 5 or 10 minutes of preheat I used the hot air for the reflow, etc.

13) This method works so well because you use your common sense and intuitive judgment. If you avoid thermal shocks and don't let the temperature rise too high, you'll end up with a nice job and the prospect of excellent long-term reliability.

14) The direct soldering method delivers thermal shock to many components, so it's not really a conservative approach.

15) It's helpful to look at the thermal profiles recommended for SMT parts on various data sheets - they're very similar these days, since most commercial board operations use automated equipment in a controlled process.

16) Many of today's parts are designed for no-lead solder processes, which means a higher temperature than what we need for our lead solder paste process here.

In my several decades of involvement with electronics, watching my ATS-3B board reflow stands out as an amazing moment. It's right up there with the first time I heard a regenerative detector function!

Have fun !

Carey Fuller
KX0R

> I'm guessing it would be preferable to re-heat components as little as
> possible. So as I look at the main board of the ATS-3B, I wonder
> which side to do first? I'm leaning toward doing the Front side (the
> side with the LED readout) since fewer parts would later sit against
> the pre-warming surface when I do the Back side.
>
> For those who have used Cash Olsen's method, how did you go about it?
> Front side first? Back side first?
>
> Would having more components pressing against the pre-warming surface
> (if you used a pre-warming at all) actually HELP because of increased
> contact?
>
> Finally did you do the active components last? First?
>
> ---
>
> Lost Q Signal - QRD

> --------------------
> QRD - 'the place is going to the dogs'; pets over-running the shack;
> alternately, using pets to carry your gear while out in the field;
> slang: 'he QRD'ed fishbowl as a dummy load.'
>

2384. Re: [AT_Sprint] Re: Hot Air SMT Soldering on Double-Sided Circuits Boards your thoughts?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-07 18:35:13 UTC
From: Kurt Savegnago
Topic: 2379 Message: 2384

Excellent tome Carey. What if one can't get all the
parts placed in one sitting? Is it O.K. to put the
unit
in the fridge in a Tupperware container to await the
next session?

I'm going to try tackling this project first:

http://www.ramseyelectronics.com/cgi-bin/commerce.exe?preadd=action&key=MR6

I have a hotplate I'm going to stick a piece of flat
steel across and test the temp and of course find the
setting that just gets water to dance.

Some of the resistors in that transmitter are smaller
than the ones in the ATS3x kits.

Kurt Savegnago KC9LDH

Slackware user since 1994

2385. Re: Hot Air SMT Soldering on Double-Sided Circuits Boards your thoughts?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-07 23:48:59 UTC
From: radio_kx0r
Topic: 2379 Message: 2385

--- In AT_Sprint@yahoogroups.com, Kurt Savegnago <ksaves2@...> wrote:
Kurt,

Yeah, tome is right. I think your idea of putting the board on the fridge is fine, but..... Once is's loaded with parts there is some risk in handling it. I think if you plan how you're going to do this and handle it really gently, you might get away with putting it "on hold". I'd suggest putting it in something where it can't slide around.

Let us know how that works out.

KX0R
Carey Fuller

>
> Excellent tome Carey. What if one can't get all the
> parts placed in one sitting? Is it O.K. to put the
> unit
> in the fridge in a Tupperware container to await the
> next session?
>
> I'm going to try tackling this project first:
>
> http://www.ramseyelectronics.com/cgi-bin/commerce.exe?
preadd=action&key=MR6
>
> I have a hotplate I'm going to stick a piece of flat
> steel across and test the temp and of course find the
> setting that just gets water to dance.
>
> Some of the resistors in that transmitter are smaller
> than the ones in the ATS3x kits.
>
> Kurt Savegnago KC9LDH
>
> Slackware user since 1994
>

2386. cup warmer

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-08 02:40:28 UTC
From: ak3f
Topic: 2386 Message: 2386

i posted a jpg of the warm up profile of my 15 w walmart cup warmer in the photo section. it topped out at 290 F.

i thought that was a little too hot, so i laid a 1/4" thick disk of black anodized aluminum on top the warmer and tried again. with the aluminum disk it topped out at 235 F and took much longer to get there (35 minutes).

i think i will use it with the disk. the disk also raises up the hot surface so that the 3B board can lay flat on it without touching the white plastic edges of the warmer.

this warmer is 3.5" in diameter.

mike - ak3f

2387. Re: [AT_Sprint] cup warmer

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-08 03:17:51 UTC
From: asfco@nycap.rr.com
Topic: 2386 Message: 2387

Dont get yourself all twisted up over this procedure... Just use your kitchen coffee maker warmer plate it works fine is large enough and gets hot enough..it is not that critical
73
John W2GB/6Y0B

----- Original Message -----
From: ak3f <mbhayden@...>
Date: Friday, December 7, 2007 9:40 pm
Subject: [AT_Sprint] cup warmer
To: AT_Sprint@yahoogroups.com

> i posted a jpg of the warm up profile of my 15 w walmart cup
> warmer in
> the photo section. it topped out at 290 F.
>
> i thought that was a little too hot, so i laid a 1/4" thick disk of
> black anodized aluminum on top the warmer and tried again. with the
> aluminum disk it topped out at 235 F and took much longer to get
there
> (35 minutes).
>
> i think i will use it with the disk. the disk also raises up the hot
> surface so that the 3B board can lay flat on it without touching the
> white plastic edges of the warmer.
>
> this warmer is 3.5" in diameter.
>
> mike - ak3f
>
>

2388. Re:Re: [AT_Sprint] cup warmer

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-08 03:55:18 UTC
From: J. Haynes
Topic: 2388 Message: 2388

John, you can say that again!

2389. Re: cup warmer

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-08 05:58:21 UTC
From: radio_kx0r
Topic: 2386 Message: 2389

--- In AT_Sprint@yahoogroups.com, "ak3f" <mbhayden@...> wrote:

Mike,

Thanks for the curve and the photo. My candle warmer is similar, except that the aluminum is 1/4" thick. I got a larger, flatter surface, and much more even heat with the plate. I think this is a good concept.

The coffee pot warmer sounds like a good idea also, as long as the temperature is OK. Most of these appliances seem to be somewhat similar, since their purpose is to heat, not boil. I think it's a good idea to use a hear spreader, even though it slows the warmup, because some of these hot plates are thin, and there may be a hot spot. A hot spot might damage part of the board.

As I posted earlier, if you put a 140 VAC variac on the AC line, you can get some variation up and down from normal.

KX0R
Carey Fuller

> i posted a jpg of the warm up profile of my 15 w walmart cup warmer in
> the photo section. it topped out at 290 F.
>
> i thought that was a little too hot, so i laid a 1/4" thick disk of
> black anodized aluminum on top the warmer and tried again. with the
> aluminum disk it topped out at 235 F and took much longer to get there
> (35 minutes).
>
> i think i will use it with the disk. the disk also raises up the hot
> surface so that the 3B board can lay flat on it without touching the
> white plastic edges of the warmer.
>
> this warmer is 3.5" in diameter.
>
> mike - ak3f
>

2390. Re: Re:Re: [AT_Sprint] cup warmer

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-08 13:42:44 UTC
From: asfco@nycap.rr.com
Topic: 2388 Message: 2390

Sure!
I built the 3A and go tthe cup warmer from Wal-Mart which was too small to fit the board onto. I found that the warming plate on our coffee maker was the perfect size for the board. I placed the board on the warming plate and followed Cash Olsens instructions for warming the board. It worked perfectly! I am sure that your idea of another wider plate on top of the warming plate you ahve would also work but what I am getting at here is that I do not think that this is all that critical...
So I would not worry too much about what you use ..it will work and you will get a good result either way.
73
John W2GB/6Y0B

----- Original Message -----
From: J. Haynes <eggs.4.iggs@...>
Date: Friday, December 7, 2007 10:55 pm
Subject: Re:Re: [AT_Sprint] cup warmer
To: AT_Sprint@yahoogroups.com, asfco@...

> John, you can say that again!
>

2391. psk31 and thinkpad 560z

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-08 14:42:22 UTC
From: Bill
Topic: 2391 Message: 2391

for the record, I just got this to work,
IBM Thinkpad 560z and simple interface. I edited the registry
as suggested by Steve to shorten the preamble time to 128ms
and lengthened the postamble to 100ms. That is 80 and 64 in hex
respectively. See message number 2372 for previous discussion.

Bill, ni5x.

2392. Re: [AT_Sprint] psk31 and thinkpad 560z

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-08 16:31:43 UTC
From: Vojtěch Bubník
Topic: 2391 Message: 2392

Hi Bill and Steve.

Thanks for reports on the preamble/postamble lengths. I will make them configurable in the software in the next release.

I understand clearly why prolonging the postamble works. But did you really need to shorten the preamble? Didn't it work with the old value?

73, Vojtech OK1IAK

2393. Re: [AT_Sprint] psk31 and thinkpad 560z

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-08 18:38:52 UTC
From: bgriffin@olp.net
Topic: 2391 Message: 2393

Hi Vojtech,

I shortened the preamble because I wasn't getting any transmit,
but I was trying several things, I know, not the correct way to
troubleshoot, but I got it to work, so I included that in my report.

I also increased the transmit volume, that is more likely the solution
to my lack of transmit.

Bill, ni5x.

PS: thanks for the software, just what I have been looking for,
extremely portable psk.

> Hi Bill and Steve.
>
> Thanks for reports on the preamble/postamble lengths. I will make them
> configurable in the software in the next release.
>
> I understand clearly why prolonging the postamble works. But did you
> really need to shorten the preamble? Didn't it work with the old value?
>
> 73, Vojtech OK1IAK
>

2394. first psk contact on ats3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-08 20:23:24 UTC
From: Bill
Topic: 2394 Message: 2394

was fine business to ae3dl in Pittsburgh
who gave me a 589 but my transmit and recieve
frequencies were off by bout 300 on the pocketdigi
display. I had the offset in the setup at 377hz.
I am in Mounds, Ok. south of Tulsa. not bad for 3 watts.

Just need to figure out the offset so I quit missing
the come backs.

Bill, ni5x.

2395. Re:3A Sprint psk3 and thinkpad

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-08 19:33:45 UTC
From: Steven Weber
Topic: 2391 Message: 2395

>I understand clearly why prolonging the postamble works. But did you really need to shorten the preamble? Didn't it work with the old value?
>
Vojtech,

The rig would not respond at all to the sound card in the Gateway Win98 PC until I made the preamble quite a bit shorter. My slightly newer eMachines XP box took making the postamble longer to make the rig come out of transmit. I had no issues with the h/p iPDQ Pocket PC in making the rig work using the default values. Otherwise, we might have stumbled onto this problem earlier.

So, making both parameters adjustable is a good idea. Seems no two sound cards are alike in how they turn on and off.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2396. another case

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-08 21:42:24 UTC
From: Fred Maas
Topic: 2396 Message: 2396
Attachments: 3 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2397. Re: [AT_Sprint] another case

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-09 00:55:02 UTC
From: john
Topic: 2396 Message: 2397

VERY nice job Fred! Wonderful work. I especially like the 'bead" on the digit window

73
John k5MO

73
John K5MO
---- Fred Maas <just.one.hill@...> wrote:
> I can't post photos to the archives as i am not a registered "Yahoo." Been
> fussing with another case while watching the snow flurries outside here at
> 7,000 ft altitude...
>
> I think I like a different approach to the square opening for the digit:
> instead of slicing out the hole with a jeweler's saw, I drilled a hole in
> the center, then cut the diagonals to the corners, then folded the created
> triangles under and back. this way instead of a ragged tin cut edge, it is
> a rounded edge of the folded metal.
>
> the lettering is done with a draftman's stick-on letters.
>
> The gold line is done with an oil based felt tipped pen, I use scotch tape
> for the borders, then take up the tape.
>
> The paint is sprayed on, then sanded with 600 grit, then polished by hand
> with the liquid polish found at auto store for taking scratches out of a
> convertible's plastic window.
>
> 72, Fred - kt5x
> (W5YA/qrp)

2398. Re: [AT_Sprint] first psk contact on ats3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-09 03:08:16 UTC
From: Steven Weber
Topic: 2394 Message: 2398

>who gave me a 589 but my transmit and recieve
>frequencies were off by bout 300 on the pocketdigi
>display. I had the offset in the setup at 377hz.

Congradulations Bill!

Your offset should be about 600 Hz. The variable is exactly where your BFO timmer happens to be set. Mine ended up at 558 Hz, but is sounds like your will end up about 650 Hz.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2399. ATS3B & QBSA for sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-09 14:07:35 UTC
From: Paul J. Beckmann
Topic: 2399 Message: 2399

There seems to be an interest in these two items and I haven't gotten around to starting either of these kits. I've opened them and inventoried parts but have not started building. If
you want them, please e-mail me (first come, first served) at wa0rse@...

ATS-3B $190 plus $5 shipping.

QBSA $45 plus $5 shipping

Shipped by priority mail. Payment by Paypal. I'll eat the Paypal charges.

Merry Christmas!

--Paul, wa0rse

2400. Re: another case

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-09 14:42:12 UTC
From: Steve Galchutt
Topic: 2396 Message: 2400

Hey Fred, Awesome job on your case!!

I added it's picture to the group photos. It deserves to live there
IMHO! Nice work!

http://ph.groups.yahoo.com/group/AT_Sprint/photos/view/5670?b=3

Steve/n0tu

2401. Re: [AT_Sprint] ATS3B & QBSA for sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-09 15:16:34 UTC
From: jess gypin
Topic: 2399 Message: 2401
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2402. Re: [AT_Sprint] ATS3B & QBSA for sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-09 15:29:56 UTC
From: Paul Beckmann
Topic: 2399 Message: 2402
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2403. Re: [AT_Sprint] ATS3B & QBSA for sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-09 15:48:37 UTC
From: jess gypin
Topic: 2399 Message: 2403
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2404. Re: [AT_Sprint] ATS3B & QBSA for sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-09 16:11:46 UTC
From: Paul Beckmann
Topic: 2399 Message: 2404
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2405. Re: ATS3B & QBSA for sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-09 16:14:54 UTC
From: Paul J. Beckmann
Topic: 2399 Message: 2405

Both are currently spoken for.

73
--Paul, wa0rse

2406. Re: [AT_Sprint] Re: ATS3B & QBSA for sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-09 19:17:50 UTC
From: ron
Topic: 2399 Message: 2406

On Sun, 2007-12-09 at 16:14 +0000, Paul J. Beckmann wrote:
> Both are currently spoken for.
>
> 73

no kidding, since you both posted private emails for all to read ...

(smile)

Ron, wb1hga

2407. Re: ATS3B & QBSA for sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-09 19:19:44 UTC
From: Paul J. Beckmann
Topic: 2399 Message: 2407

Sorry, all--

I don't post very often. Can you tell?

73
--Paul, wa0rse

--- In AT_Sprint@yahoogroups.com, ron <roncasa@...> wrote:
>
>
> On Sun, 2007-12-09 at 16:14 +0000, Paul J. Beckmann wrote:
> > Both are currently spoken for.
> >
> > 73
>
>
> no kidding, since you both posted private emails for all to read ...
>
> (smile)
>
> Ron, wb1hga
>

2408. Re: [AT_Sprint] ATS3B & QBSA for sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-10 00:15:11 UTC
From: jess gypin
Topic: 2399 Message: 2408
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2409. Re: [AT_Sprint] Re: another case

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-10 02:28:09 UTC
From: Fred Maas
Topic: 2396 Message: 2409
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2410. Re: [AT_Sprint] Re: another case

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-10 02:31:33 UTC
From: Fred Maas
Topic: 2396 Message: 2410
Attachments: 3 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2411. Re: [AT_Sprint] ATS3B & QBSA for sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-10 03:22:10 UTC
From: Paul Beckmann
Topic: 2399 Message: 2411
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2412. Re: first psk contact on ats3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-10 05:10:11 UTC
From: Bill
Topic: 2394 Message: 2412

Steve,

Thanks, the offset fixed it, ended up at 590hz and I seem to
be right on with the other stations. Have had 599 reports from Cuba
and South Carolina to Oklahoma. Enjoying this radio very much.

Bill, ni5x.

> Your offset should be about 600 Hz. The variable is exactly where
your BFO
> timmer happens to be set. Mine ended up at 558 Hz, but is sounds
like your
> will end up about 650 Hz.

2413. New Photos

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-10 20:09:49 UTC
From: Richard H. Brown, Jr.
Topic: 2413 Message: 2413

This is to let you know of a couple of new photos just posted.
Look undet Photos then ATS3B by N5BUD.
72,
Buddy

2414. Re: [AT_Sprint] New Photos

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-10 20:18:18 UTC
From: WA0ITP
Topic: 2413 Message: 2414

Nice work Buddy, how's the rig playing for you?

Back to the bench,
Winter's too valuable to waste.
72 73
Terry, WAØITP
http://www.wa0dx.org/wa0itp
http://www.wa0dx.org
http://www.4sqrp.com/
----- Original Message -----
From: Richard H. Brown, Jr.
To: AT_Sprint@yahoogroups.com
Sent: Monday, December 10, 2007 2:09 PM
Subject: [AT_Sprint] New Photos

This is to let you know of a couple of new photos just posted.
Look undet Photos then ATS3B by N5BUD.
72,
Buddy

No virus found in this incoming message.
Checked by AVG Free Edition.
Version: 7.5.503 / Virus Database: 269.16.17/1179 - Release Date: 12/9/2007 11:06 AM

2415. Announcing the birth of my new ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-11 00:45:52 UTC
From: Jack B.
Topic: 2415 Message: 2415

Firstly, thanks to all of you who provided excellent advice on building this with a hot air tool. The results paid off. That moment when I saw the digital read-out come on and I could hear the CW was one of my best amateur radio moments.

I brought the little radio to life yesterday (Sunday December 9th) and I have to say WOW! What a great little receiver! I put it on the same antenna as my 'big radios' and could easily tune in any station I could hear on the others.

I'm saving the joys of tweaking power output for later. I am getting 3 watts on 12VDC on 40m, 4 watts on 80m 30m and 17m. And nearly 5 watts on 20m and 15m. Alignment has been quite easy. I'm using MultiPSK for spectrum analysis of the audio. The signal sounds clean and well-formed.

This radio is so small yet full-featured, I really am starting to wonder if Steve got his via alien visitation (hi hi!). Really though, the components stood up just fine to heating and sometimes re-heating with a hot air embossing tool.

One small 'glitch' I'm running into is getting a nice rectangular hole so small on the tin. :) I'm wondering if there's a 'punch' that would work. So far I've just done the 'drill-a-hole and file like a mad-man' method but the results aren't as perfect as the holes I make on the drill-press.

Oh yes, and by the way, one typo in the assembly manual: the hole for the four retaining screws is NOT 7/16". :) You'll see that's a pretty obvious misprint when you get to that part. I don't have the hole size off-hand, but it's pretty small.

During the build process, I video-taped small segments. I'll try and get that up on my site ASAP (and for sure it's fine to re-use any of that here on the ATS-3 group if it rises to the quality already here).

So I'm going to head home and see if I can make a few QSOs on my new ATS-3B!!!

72/73,
Jack, K6JEB
www.k6jeb.com

PS - Using my computer scanner to take a high-res photo of the ciruit for close-up inspection was VERY helpful during this build. I was able to see bridged connections and even raised/unsoldered IC feet this way which I had missed when I did a once-over with a really good

magnifying glass.

PPS - So where do I find my ATS-3B serial number? hi hi (j/k)

2416. December NAQCC Sprint

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-11 02:25:22 UTC
From: Larry Makoski
Topic: 2416 Message: 2416

This Tuesday evening, the North American QRP CW Club will be holding its monthly sprint.

Here are the particulars:

Date and time:
Wednesday December 13th, 0130-0330 UTC
(Remember that's Tuesday evening here in the USA) That's 8:30 - 10:30 EST, 7:30 - 9:30 CST, 6:30 - 8:30 MST and 5:30 - 7:30 PST.

Bands - Frequencies:
80M - 3555-3565 kHz (Be courteous to FISTS operating on 3558 kHz)
40M - 7039-7050 kHz (Avoid W1AW on 7047.5 kHz).
20M - 14059-14065 kHz. General:
A particular station may be worked once on each band. Operate CW only. All licensed amateurs are invited to participate, but only those operating QRP (5 watts or less) are eligible for awards.

Call: CQ NA

Exchange:
RST - SPC (State Province or Country) - NAQCC Nr.
(non-Members substitute power level for NAQCC Nr., e.g. 5W, 1W, etc. Be sure to add the W.)

QSO Points:
QSO with a Member, 2 points.
QSO with a Non-member, 1 point.

Multipliers:
Each USA state
Each VE province
Each country except W/VE
All multipliers count only once in the contest.

Bonus:
If you use only a straight key for the entire sprint, multiply your score by 2.
If you use only a bug for the entire sprint, multiply your score by 1.5.
If you key with anything other than a straight key or bug, there is no bonus multiplier.

Categories:
SWA - simple wire antennas - for those using a simple wire antenna per NAQCC definition.
GAIN - gain antennas - for those using other than a simple wire antenna.

Special Award:
Our special award this month is a simple one. One certificate goes to the longest licensed ham and one to the most recently licensed. The year of your FIRST ham license is the determining factor. You need not have kept the license active continuously. You must also make at least 5 QSO's in the sprint to be considered for the SA.

Autologger SA info:
Eligible for the Special Award.......' box - Select Yes
Special Award info.......' box - Put the year of your first ham license

Prize:
Continuing this month we are giving away a set of CD's to one participant according to the following rules:

1. The participant meeting the requirements below and posting the highest score will be the winner of a set of CD's in the following months: July, August, September, October, November, January, February, March, April, and May.
A. Requirements: The participant must be a NAQCC member and can not have won a CD set previously.
B. If the highest scorer does not meet the requirements, then the CD set winner will be the next highest scorer who does meet the requirements.

2. Twice a year - in the December and June sprints, the winner will be a participant drawn at random who meets the requirements in 1A and who makes at least 5 QSO's in the sprint.

3. Club Officers (WY3H (ex-KB3LFC), K3WWP, W2LJ, K5DUZ, KD2MX) are not eligible.

REMEMBER: You HAVE to be a NAQCC member to be eligible to win the CDs; and there's still plenty of time to join before Wednesday night's sprint. To join the NAQCC, please visit:
http://www.arm-tek.net/~yoel//joinup.html

Entry Deadline:
All entries must be RECEIVED before 2400Z on December 18th, 2007. So submit as soon as possible, especially regular mail entries.

NEW! NEW! NEW!
Be sure to use the new NAQCC Sprint Autologger feature! Please visit http://home.alltel.net/johnshan/sprintlog.html after the Sprint to send in your entry!

For further information, please visit:
http://www.arm-tek.net/~yoel//sprint200712.html

2417. Re: [AT_Sprint] Re: another case

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-11 02:53:22 UTC
From: Michael Harnage
Topic: 2396 Message: 2417

These photos were moved to their own folder:

<
http://ph.groups.yahoo.com/group/AT_Sprint/photos/browse/4181
>

-mike/w1mt

--- Steve Galchutt <n0tu.qrp@...> wrote:

> Hey Fred, Awesome job on your case!!
>
> I added it's picture to the group photos. It
> deserves to live there
> IMHO! Nice work!
>
>
http://ph.groups.yahoo.com/group/AT_Sprint/photos/view/5670?b=3
>
> Steve/n0tu
>
>

Looking for last minute shopping deals?
Find them fast with Yahoo! Search.
http://tools.search.yahoo.com/newsearch/category.php?category=shopping

2418. Re: [AT_Sprint] Announcing the birth of my new ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-11 02:48:21 UTC
From: Steven Weber
Topic: 2415 Message: 2418

>PPS - So where do I find my ATS-3B serial number? hi hi (j/k)
>
Everyone has serial number 2. I have serial number 1 :-)

I really don't understand this fascination with serial number nonsense. I guess it was Elecraft who started it with the K2. Before that, no one put a serial number on kits (except maybe Heathkit).
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2419. Re:Re: [AT_Sprint] Re: another case

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-11 03:35:23 UTC
From: J. Haynes
Topic: 2419 Message: 2419

I hereby dibs serial number 0666 for this lovable QRP beast.

2420. Re: Announcing the birth of my new ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-11 04:06:58 UTC
From: Jack B.
Topic: 2415 Message: 2420

I would actually prefer a bar code. Mine would be 'gin and tonic'. :)

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
>
> >PPS - So where do I find my ATS-3B serial number? hi hi (j/k)
> >
> Everyone has serial number 2. I have serial number 1 :-)
>
> I really don't understand this fascination with serial number
nonsense. I
> guess it was Elecraft who started it with the K2. Before that, no
one put a
> serial number on kits (except maybe Heathkit).
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com
>

2421. Re: [AT_Sprint] Announcing the birth of my new ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-11 12:52:05 UTC
From: mstangelo@comcast.net
Topic: 2415 Message: 2421

Steve.

Serial numbers are helpful if you modify or update the equipment.

Elecraft has done extensive mods on their K2 line. I remember buying a used Heathkit DX-60B that had a slight chirp. I call up Heath. They asked me what the serial number was and told me they had modified the B+ filtering and sent me an upgrade kit (I believe it was a resistor and electrolytic capacitor). I still remember them being very helpful after all these years...

73,

Mike N2MS

-------------- Original message --------------
From: Steven Weber <kd1jv@...>

> >PPS - So where do I find my ATS-3B serial number? hi hi (j/k)
> >
> Everyone has serial number 2. I have serial number 1 :-)
>
> I really don't understand this fascination with serial number nonsense. I
> guess it was Elecraft who started it with the K2. Before that, no one put a
> serial number on kits (except maybe Heathkit).
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com

2422. Re: [AT_Sprint] Announcing the birth of my new ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-11 13:03:27 UTC
From: Kurt Savegnago
Topic: 2415 Message: 2422

Yeah,

One should just be happy to be able to say they
got one of the 1st run or 2nd run kits.
Come the think of it, I did order and get the second
to the last available Amplidan key Marshall Em had
last year. I didn't even realize it at the time but
wanted to gift myself.
Kurt KC9LSH
--- Steven Weber <kd1jv@...> wrote:

> >PPS - So where do I find my ATS-3B serial number?
> hi hi (j/k)
> >
> Everyone has serial number 2. I have serial number 1
> :-)
>
> I really don't understand this fascination with
> serial number nonsense. I
> guess it was Elecraft who started it with the K2.
> Before that, no one put a
> serial number on kits (except maybe Heathkit).
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com
>
>
>
> Yahoo! Groups Links
>
>
>
>
>

Slackware user since 1994

2423. History of ATS series

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-11 13:54:18 UTC
From: nn4cw
Topic: 2423 Message: 2423

Ever since reading somewhere that Steve made the first ATS from scavenged parts from a satellite receiver I've always been curious about the history and development of this great little radio. It would be great to hear from Steve about how he came up with the design and a little history behind the development of it. Did he build it from discrete components and then miniaturized with smt components or did it start out with smt components? Did he build the first smd one on a printed circuit board, etc?

Thanks

Gil NN4CW
ATS3 serial numbers 124, 275
ATS2 serial # 102
ATS3A #55 (unbuilt)
ATs3B serial #45 (unbuilt)

2424. Re: New Photos

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-11 14:08:57 UTC
From: Richard H. Brown, Jr.
Topic: 2413 Message: 2424

Hi Terry,
Thanks for asking. It seems to be working fine, I was surprised to
hear stations that my TS-2000 didn't hear. I will be using it in the
80m fox hunt tonight. See you there.
72,
Buddy - N5BUD

--- In AT_Sprint@yahoogroups.com, "WA0ITP" <wa0itp@...> wrote:
>
> Nice work Buddy, how's the rig playing for you?
>
> ----------
> Back to the bench,
> Winter's too valuable to waste.
> 72 73
> Terry, WAØITP
> http://www.wa0dx.org/wa0itp
> http://www.wa0dx.org
> http://www.4sqrp.com/
> ----- Original Message -----
> From: Richard H. Brown, Jr.
> To: AT_Sprint@yahoogroups.com
> Sent: Monday, December 10, 2007 2:09 PM
> Subject: [AT_Sprint] New Photos
>
>
> This is to let you know of a couple of new photos just posted.
> Look undet Photos then ATS3B by N5BUD.
> 72,
> Buddy
>
>
>
>
>
>
> ----------

>
>
> No virus found in this incoming message.
> Checked by AVG Free Edition.
> Version: 7.5.503 / Virus Database: 269.16.17/1179 - Release Date:
12/9/2007 11:06 AM
>

2425. Re: another case

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-11 14:18:14 UTC
From: Buddy Brown
Topic: 2396 Message: 2425

Very Nice looking case.
Buddy - N5BUD

2426. Re: [AT_Sprint] History of ATS series

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-11 14:49:54 UTC
From: Alan Fryer
Topic: 2423 Message: 2426

I would be interested in a comparison summary of features and/or menu options for each model.

I'll bet someone has one !

Alan, N3BJ

----- Original Message -----
From: nn4cw
To: AT_Sprint@yahoogroups.com
Sent: Tuesday, December 11, 2007 8:54 AM
Subject: [AT_Sprint] History of ATS series

Ever since reading somewhere that Steve made the first ATS from scavenged parts from a satellite receiver I've always been curious about the history and development of this great little radio. It would be great to hear from Steve about how he came up with the design and a little history behind the development of it. Did he build it from discrete components and then miniaturized with smt components or did it start out with smt components? Did he build the first smd one on a printed circuit board, etc?

Thanks

Gil NN4CW
ATS3 serial numbers 124, 275
ATS2 serial # 102
ATS3A #55 (unbuilt)
ATs3B serial #45 (unbuilt)

2427. Re: [AT_Sprint] History of ATS series

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-11 18:13:05 UTC
From: Steven Weber
Topic: 2423 Message: 2427

The ATS series started out as a SMT project in an attempt to build a trail friendly rig into an Altoids tin. It was built on two boards which plugged in together, was a dual band 20/40 meter rig with relay switched filters. The PA was a NPN SOT-223 device with a fairly low Ft, so power out wasn't very good, even at 12 volts. Maybe 2 watts on 40 and 1 watt on 20.

Besides the low power output, the most serious problem was mechanical. The two boards were the same size and had common connections along both edges of the boards. Both boards had to be connected together for anything to work, so it was very difficult to trouble shoot if something wasn't working right. Longish jumpers had to be soldered between the boards so they could be placed next to each other, instead of being stacked so it could be worked on.

Dispite this, I put picutres of the rig on my then new web site on qsl.net. It wasn't long before I was getting requests to kit the rig. Since what I had wasn't real practical to kit or build, I went back to work on it.

The breakthrough which made the ATS rigs possible was the invention of the square wave, logic gate driven 2N7000 PA. At last I had a PA which was simple, took up little board space, was effiecent, had consistant power output on different bands, worked at low voltages and used common, inexpensive parts. The second innovation was to use the now familer band filter module boards. I was now able to fit everything on a single board, dispite using mostly 1206 sized passive parts.

As for functions, it only had the basics, because the processor used was an Atmel 90S2313 with only 2K of memory. It had RIT, keyer with one memory, Tune up mode, the push button tuning and frequency annunciation.

Only about 50 of the original ATS rigs were produced.

A year or two later, some new parts became available, or I became aware of them, like the low power AD9834 DDS chip, the TI MPS430 processor and LM4808 low power headphone amplifier. I decided to try these new parts in a new ATS design to see if the current consumption could be significantly reduced. The ATS-1 drew some 50 ma on receive, which was a significant amount of current.

Thus, the ATS-2 was born. With the new parts, receive current dropped to a much more modest 25-26 ma, half of what the ATS-1 took. I also made the board much larger and put it in a plastic box which could also hold AAA batteries. The larger board allowed parts to be spaced farther apart, making it easier to build, adding a few slide switches and little volume control.

With more memory available in the MPS430 processor, DFE mode was added, along with XIT and the calibration modes. 80 meters was also added, making it a 4 band rig, instead of just the three bands the ATS-1 did. (40/30/20)

About 100 of these were produced. I might have did more, but the plastic box which was supplied had the front silk screened. This I did myself, which turned out to be a mistake. Most of them turned out okay, but not great. It was a lot of work. I resolved to go back to the Altoids tin formate. While some liked the larger form factor of the ATS-2, most still wanted the smaller Altoids size rig. Besides, the KX1 came out about then and I wanted to have the smallest, lightest rig there was.

So, back to the Altoids sized rig with the ATS-3, followed by the 3A and finally the 3B, each which had incermental improvments from things learned from the previous design.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2428. Re: [AT_Sprint] History of ATS series

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-11 18:58:16 UTC
From: Hank Greeb
Topic: 2423 Message: 2428

Steve:

Nice writeup about the ATS series of rigs. It is obvious that you put lots of thought into the design of these rigs!

I'm the proud owner of one of the original ATS rigs. I guess since it was the first, there's no mention of ATS-1 in the manual which came with it, just ATS. I wasn't aware that there were only 50 or so of them produced. I'm the third owner, the first owner built it, but didn't get around to putting it into an Altoids tin, neither did the second. The second owner found it in a drawer, decided that it was surplus, and sold it to me. He says it is in working condition - all the parts seem intact. I haven't powered it up, so I may be screaming for help if it doesn't seem to work correctly. I have it stashed in a place where it is prominently displayed and will get it into an Altoids tin one of these years! It seems to be a museum piece!

72/73 de n8xx Hg

Steven Weber wrote:

>The ATS series started out as a SMT project in an attempt to build a trail friendly rig into an Altoids tin. It was built on two boards which plugged in together, was a dual band 20/40 meter rig with relay switched filters. The PA was a NPN SOT-223 device with a fairly low Ft, so power out wasn't very good, even at 12 volts. Maybe 2 watts on 40 and 1 watt on 20.
>
>Besides the low power output, the most serious problem was mechanical. The two boards were the same size and had common connections along both edges of the boards. Both boards had to be connected together for anything to work, so it was very difficult to trouble shoot if something wasn't working right. Longish jumpers had to be soldered between the boards so they could be placed next to each other, instead of being stacked so it could be worked on.
>
>Dispite this, I put picutres of the rig on my then new web site on qsl.net. It wasn't long before I was getting requests to kit the rig. Since what I had wasn't real practical to kit or build, I went back to work on it.
>
>The breakthrough which made the ATS rigs possible was the invention of the square wave, logic gate driven 2N7000 PA. At last I had a PA which was simple, took up little board space, was effiecent, had consistant power output on different bands, worked at low voltages and used common, inexpensive parts. The second innovation was to use the now familer band filter module boards. I was now able to fit everything on a single board, dispite using mostly 1206 sized passive parts.
>
>As for functions, it only had the basics, because the processor used was an Atmel 90S2313 with only 2K of memory. It had RIT, keyer with one memory, Tune up mode, the push button

tuning and frequency annunciation.
>
>Only about 50 of the original ATS rigs were produced.
>
>A year or two later, some new parts became available, or I became aware of them, like the low power AD9834 DDS chip, the TI MPS430 processor and LM4808 low power headphone amplifier. I decided to try these new parts in a new ATS design to see if the current consumption could be significantly reduced. The ATS-1 drew some 50 ma on receive, which was a significant amount of current.
>
>Thus, the ATS-2 was born. With the new parts, receive current dropped to a much more modest 25-26 ma, half of what the ATS-1 took. I also made the board much larger and put it in a plastic box which could also hold AAA batteries. The larger board allowed parts to be spaced farther apart, making it easier to build, adding a few slide switches and little volume
>control.
>
>With more memory available in the MPS430 processor, DFE mode was added, along with XIT and the calibration modes. 80 meters was also added, making it a 4 band rig, instead of just the three bands the ATS-1 did. (40/30/20)
>
>About 100 of these were produced. I might have did more, but the plastic box which was supplied had the front silk screened. This I did myself, which turned out to be a mistake. Most of them turned out okay, but not great. It was a lot of work. I resolved to go back to the Altoids tin formate. While some liked the larger form factor of the ATS-2, most still wanted the smaller Altoids size rig. Besides, the KX1 came out about then and I wanted to have the smallest, lightest rig there was.
>
>So, back to the Altoids sized rig with the ATS-3, followed by the 3A and finally the 3B, each which had incermental improvments from things learned from the previous design.
>
>72,
>Steve, KD1JV
>"Melt Solder"
>White Mountains of New Hampshire
>http://kd1jv.qrpradio.com
>
>

2429. Re: [AT_Sprint] History of ATS series

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-11 19:39:50 UTC
From: Gil Stacy
Topic: 2423 Message: 2429
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2430. Re: [AT_Sprint] History of ATS series

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-11 23:53:56 UTC
From: John A. Evans - N0HJ
Topic: 2423 Message: 2430

It may have slipped his mind, but Steve did have available a version of firmware for the original ATS that provided Direct Frequency Entry (DFE), since mine has this firmware.

72 - john - n0hj

2431. Re: History of ATS series

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-12 00:06:32 UTC
From: radio_kx0r
Topic: 2423 Message: 2431

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:

Steve,

Thanks for this nice writeup. Many of us were unaware of the
background behind this amazing series of radios.

I had a hunch that you were influenced by the KX1. I built a KX1
before I knew about your design, and I was pleased with it, until I
built and used your ATS-3A. It's an apples and oranges comparison,
but I think you blew away the competition. The "B" is just a jewel.
I do wonder if you've really saturated your potential market - or if
you care.

In any event, we're all grateful for your work, and for the personal
responses that make being part of this group so much fun.

The 2N7000 final with the square wave drive really is a breakthrough,
compared to the bipolar designs with tuned stages, lots of parts,
etc. Your design's simpler, incredibly efficient, and better.

Thank you!
72/73

Carey Fuller
KX0R
>
> The ATS series started out as a SMT project in an attempt to build
a trail
> friendly rig into an Altoids tin. It was built on two boards which
plugged
> in together, was a dual band 20/40 meter rig with relay switched
filters.
> The PA was a NPN SOT-223 device with a fairly low Ft, so power out
wasn't
> very good, even at 12 volts. Maybe 2 watts on 40 and 1 watt on 20.
>
> Besides the low power output, the most serious problem was
mechanical. The
> two boards were the same size and had common connections along both
edges
> of the boards. Both boards had to be connected together for
anything to
> work, so it was very difficult to trouble shoot if something wasn't
working
> right. Longish jumpers had to be soldered between the boards so
they could

> be placed next to each other, instead of being stacked so it could
be
> worked on.
>
> Dispite this, I put picutres of the rig on my then new web site on
qsl.net.
> It wasn't long before I was getting requests to kit the rig. Since
what I
> had wasn't real practical to kit or build, I went back to work on
it.
>
> The breakthrough which made the ATS rigs possible was the invention
of the
> square wave, logic gate driven 2N7000 PA. At last I had a PA which
was
> simple, took up little board space, was effiecent, had consistant
power
> output on different bands, worked at low voltages and used common,
> inexpensive parts. The second innovation was to use the now familer
band
> filter module boards. I was now able to fit everything on a single
board,
> dispite using mostly 1206 sized passive parts.
>
> As for functions, it only had the basics, because the processor
used was an
> Atmel 90S2313 with only 2K of memory. It had RIT, keyer with one
memory,
> Tune up mode, the push button tuning and frequency annunciation.
>
> Only about 50 of the original ATS rigs were produced.
>
> A year or two later, some new parts became available, or I became
aware of
> them, like the low power AD9834 DDS chip, the TI MPS430 processor
and
> LM4808 low power headphone amplifier. I decided to try these new
parts in a
> new ATS design to see if the current consumption could be
significantly
> reduced. The ATS-1 drew some 50 ma on receive, which was a
significant
> amount of current.
>
> Thus, the ATS-2 was born. With the new parts, receive current
dropped to a
> much more modest 25-26 ma, half of what the ATS-1 took. I also made
the
> board much larger and put it in a plastic box which could also hold
AAA

> batteries. The larger board allowed parts to be spaced farther
apart,
> making it easier to build, adding a few slide switches and little
volume
> control.
>
> With more memory available in the MPS430 processor, DFE mode was
added,
> along with XIT and the calibration modes. 80 meters was also added,
making
> it a 4 band rig, instead of just the three bands the ATS-1 did.
(40/30/20)
>
> About 100 of these were produced. I might have did more, but the
plastic
> box which was supplied had the front silk screened. This I did
myself,
> which turned out to be a mistake. Most of them turned out okay, but
not
> great. It was a lot of work. I resolved to go back to the Altoids
tin
> formate. While some liked the larger form factor of the ATS-2,
most still
> wanted the smaller Altoids size rig. Besides, the KX1 came out
about then
> and I wanted to have the smallest, lightest rig there was.
>
> So, back to the Altoids sized rig with the ATS-3, followed by the
3A and
> finally the 3B, each which had incermental improvments from things
learned
> from the previous design.
>
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com
>

2432. KD1JV SWR Meter Question: Polarity of LEDs

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-12 13:59:05 UTC
From: kc7fys
Topic: 2432 Message: 2432

My question is about the rectangular LEDs in the Altoids-friendly SWR meter Steve designed, anybody who built this, could you tell me if flat side of the circles on the PCB indicates the LONG or SHORT lead of the LEDs? Or is this not critical?
Thanks,
Jonathan

2433. Re: [AT_Sprint] KD1JV SWR Meter Question: Polarity of LEDs

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-12 15:02:52 UTC
From: mbhayden
Topic: 2432 Message: 2433
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2434. Re: [AT_Sprint] KD1JV SWR Meter Question: Polarity of LEDs

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-12 15:05:09 UTC
From: John A. Evans - N0HJ
Topic: 2432 Message: 2434

And if that doesn't work, try reversing the direction. Seems to me I recall, at least with a batch from Steve's original kits, that there was a silk-screening error that had them backwards.

72 - john - n0hj

mbhayden wrote:
>
> it does matter.
>
> typically the flat on on LED (and the shorter lead) is the negative
> side, so my guess is that you should put the short lead nearest the
> flat side of the circle.
>
> mike ak3f
>

2435. Re: KD1JV SWR Meter Question: Polarity of LEDs

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-12 15:51:54 UTC
From: kc7fys
Topic: 2432 Message: 2435

Thanks Mike and others.
I got it. I had to remove all the LEDs. Gave my wife a chance to get into ham radio with the solder sucker. She's a good sport.
Thanks. Like all Steve's kits--I hate to put this in an Altoids tin! It's too nice.
Jonathan

2436. Re: History of ATS series

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-12 16:31:23 UTC
From: mikee30h
Topic: 2423 Message: 2436

It nice to know the history, but my bigger concern is with the FUTURE of the radio. I use this radio while backpacking, and while there are substitutes for it as a trail friendly radio, there is arguably (?) no GOOD substitute for it. I don't know of any rig that has the same size/weight/features mix, or even comes close to it.

If the ATS ceases to be an available kit soon (as seems likely), those of us who put it in our backpacks will certainly want to make sure that one is available to us many years down the road. That's mostly why I decided to also build the 3B even though I am quite happy with the 3A. Hopefully, someone will decide to kit the rig on an ongoing basis once Steve moves on from it.

And since it's the Holiday Season: I wish for the perfect companion to the ATS--an auto tuner in an Altoids tin, with a tuning range that is at least equal to the Elecraft T1. On the trail, THAT would be a truly awesome set-up! Now, I don't know if it's possible, but if anyone could do it .

--- In AT_Sprint@yahoogroups.com, "nn4cw" <gilstacy@...> wrote:
>
> Ever since reading somewhere that Steve made the first ATS from
> scavenged parts from a satellite receiver I've always been curious
> about the history and development of this great little radio. It
> would be great to hear from Steve about how he came up with the
design
> and a little history behind the development of it. Did he build
it
> from discrete components and then miniaturized with smt components
or
> did it start out with smt components? Did he build the first smd
one
> on a printed circuit board, etc?
>
> Thanks
>
> Gil NN4CW
> ATS3 serial numbers 124, 275
> ATS2 serial # 102
> ATS3A #55 (unbuilt)
> ATs3B serial #45 (unbuilt)
>

2437. Re: [AT_Sprint] Re: History of ATS series

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-12 17:52:25 UTC
From: Kurt Savegnago
Topic: 2423 Message: 2437

An autotuner. YIKES! That would be awesome but
me thinks it might be hard to fit the toroids
in an Altoids tin.

Each iteration of the rig had improvements over
the one before it. Several of Steve's earlier
designs are available, (Not ATS) elsewhere.

If the 3B is as far as the design can go, I suspect
he might allow someone to carry it on if he is not
interested in the future.
If one misses out on an offering, it's ashame but they
just have to be patient for the next project.

Kurt KC9LDH

> If the ATS ceases to be an available kit soon (as
> seems likely),
> those of us who put it in our backpacks will
> certainly want to make
> sure that one is available to us many years down the
> road. That's
> mostly why I decided to also build the 3B even
> though I am quite
> happy with the 3A. Hopefully, someone will decide to
> kit the rig on
> an ongoing basis once Steve moves on from it.
>
> And since it's the Holiday Season: I wish for the
> perfect companion
> to the ATS--an auto tuner in an Altoids tin, with a
> tuning range
> that is at least equal to the Elecraft T1. On the
> trail, THAT would
> be a truly awesome set-up! Now, I don't know if it's
> possible, but
> if anyone could do it?.

Slackware user since 1994

2438. Re: History of ATS series -or- Get off my case!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-12 21:45:53 UTC
From: kc7fys
Topic: 2423 Message: 2438

--- In AT_Sprint@yahoogroups.com, Kurt Savegnago <ksaves2@...> wrote:
>
> An autotuner. YIKES! That would be awesome but
> me thinks it might be hard to fit the toroids
> in an Altoids tin.

It's interesting about cases--because after assembling the T1, I have the same complaints about the case as others have had. Nothing about it says, "Hey, I put that together myself," like the ATS3. On the other hand so many have also said that such a premium piece of equipment as the Bee shouldn't find itself in a lowly breath mint can. Perhaps that's the irony--it's the Maxwell Smart Shoephone of the QRP world. There's something about the subtle beauty of the Altoids tin.
Jonathan

2439. Re: History of ATS series -or- Get off my case!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-12 22:55:28 UTC
From: mikee30h
Topic: 2423 Message: 2439

I'm ok with the T1 case, and the thing works great. It's just that it is far larger than the ATS, which just seems wrong. A companion tuner to the ATS that has the functionality of the T1 (or maybe fewer bells and whistles) but has a similar size and weight as the ATS would be very nice. I currently use the Altoids tuner with the jumpers that Steve designed. It works well enough, but the jumpers are somewhat tedious. Later interations of that tuner with toggle switches make the package significantly larger. But, as noted here, an auto tuner in an Altoids might not be feasible.

--- In AT_Sprint@yahoogroups.com, "kc7fys" <kc7fys@...> wrote:
>
> --- In AT_Sprint@yahoogroups.com, Kurt Savegnago <ksaves2@> wrote:
> >
> > An autotuner. YIKES! That would be awesome but
> > me thinks it might be hard to fit the toroids
> > in an Altoids tin.
>
> It's interesting about cases--because after assembling the T1, I have
> the same complaints about the case as others have had. Nothing about
> it says, "Hey, I put that together myself," like the ATS3. On the
> other hand so many have also said that such a premium piece of
> equipment as the Bee shouldn't find itself in a lowly breath mint
can.
> Perhaps that's the irony--it's the Maxwell Smart Shoephone of the QRP
> world. There's something about the subtle beauty of the Altoids tin.
> Jonathan
>

2440. Re: [AT_Sprint] Re: History of ATS series

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-12 23:20:34 UTC
From: Hank Greeb
Topic: 2423 Message: 2440

Would folks pay the price of a K-1 for an ATS rig? It seems that the K-1 is the nearest competition to the ATS, but it costs considerably more, especially if you want all its features and band modules.?

Maybe Steve is doing us a favor by making the kits very near his cost, since there's nothing on the market with anything near the features at anything near the price. I haven't priced the components on a one up basis, but his price seems very reasonable.

72/73 de n8xx Hg

Kurt Savegnago wrote:
> <snip>
>
> If the 3B is as far as the design can go, I suspect he might allow someone to carry it on if he is not interested in the future. If one misses out on an offering, it's ashame but they just have to be patient for the next project.
>
> Kurt KC9LDH

2441. Re: History of ATS series -or- Get off my case!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-13 02:09:58 UTC
From: Garry
Topic: 2423 Message: 2441

The Altoids tin as a case may appear to some to be less than optimum appearance wise but if so it may just be that you're not trying hard enough. 9>) Have a look at some of these.

http://steampunkworkshop.com/altoid-etch.shtml.

They are not perfect but they sure are interesting and different. You're only limited by your imagination.

73

Garry/Ve7ajj

-- In AT_Sprint@yahoogroups.com, "mikee30h" <nr7fcall@...> wrote:
>
> I'm ok with the T1 case, and the thing works great. It's just that it
> is far larger than the ATS, which just seems wrong. A companion tuner
> to the ATS that has the functionality of the T1 (or maybe fewer bells
> and whistles) but has a similar size and weight as the ATS would be
> very nice. I currently use the Altoids tuner with the jumpers that
> Steve designed. It works well enough, but the jumpers are somewhat
> tedious. Later interations of that tuner with toggle switches make the
> package significantly larger. But, as noted here, an auto tuner in an
> Altoids might not be feasible.
>
>
> --- In AT_Sprint@yahoogroups.com, "kc7fys" <kc7fys@> wrote:
> >
> > --- In AT_Sprint@yahoogroups.com, Kurt Savegnago <ksaves2@> wrote:
> > >
> > > An autotuner. YIKES! That would be awesome but
> > > me thinks it might be hard to fit the toroids
> > > in an Altoids tin.
> >
> > It's interesting about cases--because after assembling the T1, I have
> > the same complaints about the case as others have had. Nothing about
> > it says, "Hey, I put that together myself," like the ATS3. On the
> > other hand so many have also said that such a premium piece of
> > equipment as the Bee shouldn't find itself in a lowly breath mint

> can.
> > Perhaps that's the irony--it's the Maxwell Smart Shoephone of the
QRP
> > world. There's something about the subtle beauty of the Altoids
tin.
> > Jonathan
> >
>

2442. Re: History of ATS series

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-13 03:32:08 UTC
From: kc7fys
Topic: 2423 Message: 2442

Another formative fact about the ATS series is Mr. Weber's rather rich and varied hiking experience, and his considerable volume of hiking tips given on his online journal <http://www.trailjournals.com/entry.cfm?trailname=5660>. Lightweight mobility is an absolute necessity for hikers covering hundreds of miles. Those who have been here with the ATS for years know this--but it's an obvious fact not often mentioned. I have been scanning through the trail journal myself, and it's reaffirming to me that good hams have a full life off-the-air!
It's a good read, and puts the ATS3B in better context.
Jonathan KC7FYS/7J1

2443. ATS Enclosure

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-13 03:39:59 UTC
From: deezulsmoke
Topic: 2423 Message: 2443

Not sure if anyone has used one of these but this is what I am going to use for my ATS when I get around to building it. I have already gotten the enclosure and it is TOP NOTCH. AA-1 means alternative to Altoids Tin if someone wants something that is a bit more of a real enclosure. I am not knocking the Altoids method , I just wanted something a bit more sturdy and befitting of the price and performance of this rig. Now all I have to do is find someone to build it for me ;-)
http://www.americanmorse.com/aa1.htm
Jess AE0CW <><

2444. Re: [AT_Sprint] ATS Enclosure

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-13 05:05:11 UTC
From: Steven Weber
Topic: 2423 Message: 2444

>gotten the enclosure and it is TOP NOTCH. AA-1 means alternative to
>Altoids Tin if someone wants something that is a bit more of a real

The AA1 is a nice box, but it is less than ideal for a ATS rig, primarly due to its somewhat thick walls.

Since the rig was designed to go into an Altoids tin, it really is the ideal enclosuer for it. With a little work, it can be made to look quite nice and seems to be much of the fun, seeing what some of you have done.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2445. Re: [AT_Sprint] Re: History of ATS series -or- Get off my case!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-13 05:13:10 UTC
From: Steven Weber
Topic: 2423 Message: 2445

>I'm ok with the T1 case, and the thing works great. It's just that it
>is far larger than the ATS, which just seems wrong. A companion tuner
>to the ATS that has the functionality of the T1 (or maybe fewer bells
>and whistles) but has a similar size and weight as the ATS would be

The major obstical to a really small auto tuner is the relays. Until
someone makes really tiny latching relays, it just won't fit. TO-5 sized
ones would be great. They do make TO-5 sized relays, but not latching ones
and they are very expensive (like 20 bucks a pop!)
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2446. Re: [AT_Sprint] Re: History of ATS series

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-13 05:14:18 UTC
From: Steven Weber
Topic: 2423 Message: 2446

>It nice to know the history, but my bigger concern is with the
>FUTURE of the radio. I use this radio while backpacking, and while

It is likely I will be producing these radios on and off for some time to
come.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2447. Thanks Charles

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-13 05:45:00 UTC
From: kc7fys
Topic: 2447 Message: 2447

Sorry, I don't see your callsign here, Charles M of TX, thanks for the
toroid shipped toute suite to chez 7J1AWL.
Hams are the greatest when you need a part.

2448. Re: [AT_Sprint] ATS Enclosure

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-13 14:24:51 UTC
From: Mark Brueggemann
Topic: 2423 Message: 2448

> gotten the enclosure and it is TOP NOTCH.

Maybe from an aesthetic standpoint but methinks if I'm taking this thing out in the woods, tossing it around in a pack and generally beating the hell out of it I want something that's tough and repels water.

<http://pelican.com/cases_detail.php?Case=1010>

Altoids tins are novel and OK for "indoor" use, but out in the field I'd want something a lot more robust. If you're clever you could probably fit all the band modules, some ear buds and some micro paddles in the above mentioned case, making it one-box fits-all solution.

Mark K5LXP
Albuquerque, NM

2449. Re: ATS Enclosure

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-13 14:26:02 UTC
From: ve3wmb
Topic: 2423 Message: 2449

I'll post some photos of my ATS-3A in the AA-1 enclosure when I get a chance.

As Steve noted, the walls are a bit thick so the downside is that the jacks on the circuit board don't protrude all of the way through the side of the enclosure as they would with an Altoids tin so I had to make the holes a much bigger diameter than I would have liked to accomodate the jacks for power/phones and paddle. Still it works ok and with the pivoting top (bottom in this application) it makes band changes a snap.

Michael VE3WMB

--- In AT_Sprint@yahoogroups.com, "deezulsmoke" <ontarget1911@...> wrote:
>
> Not sure if anyone has used one of these but this is what I am going
> to use for my ATS when I get around to building it. I have already
> gotten the enclosure and it is TOP NOTCH. AA-1 means alternative to
> Altoids Tin if someone wants something that is a bit more of a real
> enclosure. I am not knocking the Altoids method , I just wanted
> something a bit more sturdy and befitting of the price and performance
> of this rig. Now all I have to do is find someone to build it for me ;-
>)
> http://www.americanmorse.com/aa1.htm
> Jess AE0CW <><
>

2450. Re: [AT_Sprint] ATS Enclosure

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-13 15:28:55 UTC
From: jess gypin
Topic: 2423 Message: 2450
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2451. Re: History of ATS series

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-13 17:05:40 UTC
From: mlangenf
Topic: 2423 Message: 2451

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:

>
> It is likely I will be producing these radios on and off for some
time to
> come.
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com
>

This is cheering news. I wonder if a 10/6 meter ATS (or MMR) is on
the horizon? Wouldn't THAT be a hoot for cycle 24?

Thanks, Steve. Your kit production may be "on and off," but the fun is
non-stop!

72,

Mark -- WA9ETW

2452. Re: History of ATS series

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-13 18:10:51 UTC
From: tf3kx
Topic: 2423 Message: 2452

This is great news!

Not having any of your kits yet, I look forward to the announcement
of the next run - whether it may be unchanged or modified in any way.

Also, let the rest of us know if we can help out in any way. Spread
the word and gather up potential buyers for the next wave?

Kristinn, TF3KX

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
>
>
> >It nice to know the history, but my bigger concern is with the
> >FUTURE of the radio. I use this radio while backpacking, and while
>
> It is likely I will be producing these radios on and off for some
time to
> come.
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com
>

2453. Re: [AT_Sprint] Re: History of ATS series

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-13 18:18:10 UTC
From: Kurt Savegnago
Topic: 2423 Message: 2453

--- tf3kx <kristinn1@...> wrote:

> This is great news!
>
> Not having any of your kits yet, I look forward to
> the announcement
> of the next run - whether it may be unchanged or
> modified in any way.
>
> Also, let the rest of us know if we can help out in
> any way. Spread
> the word and gather up potential buyers for the next
> wave?
>
> Kristinn, TF3KX

Kristinn,

Just monitor this group and Steve usually posts
in advance when he will accept orders. Will also post
estimates in advance as to how long it will be before
he is going to do a run. He doesn't like prepayment
as it is a chore to keep track of who's paid what.
Plus, I think he wasn't big on "waiting" lists
either. He already said he'll be making this little
radio for some time to come so be patient.

Kurt KC9LDH

Slackware user since 1994

2454. Trouble with new ATS-3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-13 22:23:18 UTC
From: lownslow1601
Topic: 2454 Message: 2454

When I received my ATS-3B kit, I realized it was time I sucked it up and assembled my ATS-3a kit! I built it with a soldering iron, rather than using the Cash Olsen technique. Assembly went well and when I plugged in the 40m filter board, the receiver worked and the transmitter put out about 2.5 to 3 watts with the power supply set at 9v DC. The only anomaly I noticed was that the output would occasionally drop to about 1.5 to 2 watts and then go back up to near 3 watts. I poked around, but couldn't determine the reason for this phenomenon.

When I had the 20m filter board completed, I plugged it in to make the adjustments and discovered that the transmitter was no longer putting out any power. The side tone was present and other functions seemed to be working. Then I noticed that the receiver had also stopped working. The radio would still recognize different filter boards, though, so I thought the uP was working OK. I referred to the chart of voltages, provided in the manual, and checked IC voltages pin for pin. I found a few discrepancies with no filter board plugged in and a supply voltage of 9.0v DC.

U6: pin 3 was 3.50v, rather than 0v, and pin 17 was 3.50v, rather than 0v.
U7: pin 20 was 0.49v, rather than 0.75v.

There were no voltages on Q6, 7, and 8.

As I was taking the voltage readings, I accidentally bumped the dash side of my paddle and the side tone came on and didn't stop. I found that if I hit the dot paddle, the side tone stopped. This observation alarmed me, because I thought that things were continuing to fail in the radio.

I looked the radio over carefully. There are no burned or broken components that I can see. Since one commonality between the receiver and the transmitter is the output filter, I looked that over and it looks OK.

Suggestions? Thanks and 72/73, Dave K1YHR.

2455. Re: ATS Enclosure

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-14 00:26:24 UTC
From: Jack B.
Topic: 2423 Message: 2455

have any of you come up with a solution for keeping the rig generally water resistant? Whether in an Altoids tin or something else, my concern is moisture/dust getting into the holes for the buttons. I'm sure some sort of 'boot' that fits over the buttons and seals to the container would work. Where to start looking for something like this?

The jacks present another issue but I imagine using small o-rings that press between the container and the jack on the inside of the chassis.

By the way, last night I had time to make my first ATS-3B QSO, with a station up in White Salmon, WA on 80m, about 535 miles as the aether flies. I hadn't even adjusted my SWR (which must have been around 2:1 into the Butternut HF6V) nor had I peaked the power output of the band filter module. My output was 3watts to the antenna. He gave me a 599 "pounding in here" report along with clean keying and signal characteristics. Not long after that I had a station just over the hill in Berkeley call me. What a blast!

My ATS-3B sits in a 'prototype Altoids tin. I had stripped all the paint from it. The holes, based on the manual template, were off some. But I just wanted something to put it in until I have time to get a perfectly-drilled container going. And as I said, I'm hoping to keep it mostly water resistant, since taking it to the beach (along with our water-loving dog) means seawater and sand. :)

I'm so happy I put this rig together. Possibly the most fun I've had in ham radio in ages.

I've ordered the rail-to-rail op amp to build a computer interface. Anyone else have any caveats on this? How did you mount it (in the ATS case or outside?)?

72/73,
Jack, K6JEB
www.k6jeb.com

--- In AT_Sprint@yahoogroups.com, "ve3wmb" <mbabineau@...> wrote:
>
> I'll post some photos of my ATS-3A in the AA-1 enclosure when I get a
> chance.
>
> As Steve noted, the walls are a bit thick so the downside is that the
> jacks on the circuit board don't protrude all of the way through the
> side of the enclosure as they would with an Altoids tin so I had to
> make the holes a much bigger diameter than I would have liked to
> accomodate the jacks for power/phones and paddle. Still it works ok
> and with the pivoting top (bottom in this application) it makes band

> changes a snap.
>
> Michael VE3WMB
>
>
> --- In AT_Sprint@yahoogroups.com, "deezulsmoke" <ontarget1911@> wrote:
> >
> > Not sure if anyone has used one of these but this is what I am going
> > to use for my ATS when I get around to building it. I have already
> > gotten the enclosure and it is TOP NOTCH. AA-1 means alternative to
> > Altoids Tin if someone wants something that is a bit more of a real
> > enclosure. I am not knocking the Altoids method , I just wanted
> > something a bit more sturdy and befitting of the price and
performance
> > of this rig. Now all I have to do is find someone to build it for
me ;-
> >)
> > http://www.americanmorse.com/aa1.htm
> > Jess AE0CW <><
> >
>

2456. Re: [AT_Sprint] Re: ATS Enclosure

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-14 02:49:57 UTC
From: Gary Raney
Topic: 2423 Message: 2456

I have my ATS-3B installed in a AA-1 enclosure and find it to be very rugged. I was concerned that a Altoids tin wouldn't hold up to my brand of punishment. I also conformal coated my board using HumiSeal. It sprays on, but be sure to mask off anything you don't want coated
(switches, ground pads, trimmer caps, connectors, etc.). I wouldn't submerge it, but it gives me piece of mind if the radio is n my bag when it starts raining.

Gary KM5TY

On Dec 13, 2007, at 5:26 PM, Jack B. wrote:

> have any of you come up with a solution for keeping the rig generally
> water resistant? Whether in an Altoids tin or something else, my
> concern is moisture/dust getting into the holes for the buttons. I'm
> sure some sort of 'boot' that fits over the buttons and seals to the
> container would work. Where to start looking for something like this?
>
> The jacks present another issue but I imagine using small o-rings that
> press between the container and the jack on the inside of the chassis.
>
> By the way, last night I had time to make my first ATS-3B QSO, with a
> station up in White Salmon, WA on 80m, about 535 miles as the aether
> flies. I hadn't even adjusted my SWR (which must have been around 2:1
> into the Butternut HF6V) nor had I peaked the power output of the band
> filter module. My output was 3watts to the antenna. He gave me a 599
> "pounding in here" report along with clean keying and signal
> characteristics. Not long after that I had a station just over the
> hill in Berkeley call me. What a blast!
>
> My ATS-3B sits in a 'prototype Altoids tin. I had stripped all the
> paint from it. The holes, based on the manual template, were off
> some. But I just wanted something to put it in until I have time to
> get a perfectly-drilled container going. And as I said, I'm hoping to
> keep it mostly water resistant, since taking it to the beach (along
> with our water-loving dog) means seawater and sand. :)
>
> I'm so happy I put this rig together. Possibly the most fun I've had
> in ham radio in ages.
>
> I've ordered the rail-to-rail op amp to build a computer interface.
> Anyone else have any caveats on this? How did you mount it (in the
> ATS case or outside?)?
>
> 72/73,

> Jack, K6JEB
> www.k6jeb.com
>
> --- In AT_Sprint@yahoogroups.com, "ve3wmb" <mbabineau@...> wrote:
> >
> > I'll post some photos of my ATS-3A in the AA-1 enclosure when I
> get a
> > chance.
> >
> > As Steve noted, the walls are a bit thick so the downside is that
> the
> > jacks on the circuit board don't protrude all of the way through the
> > side of the enclosure as they would with an Altoids tin so I had to
> > make the holes a much bigger diameter than I would have liked to
> > accomodate the jacks for power/phones and paddle. Still it works ok
> > and with the pivoting top (bottom in this application) it makes band
> > changes a snap.
> >
> > Michael VE3WMB
> >
> >
> > --- In AT_Sprint@yahoogroups.com, "deezulsmoke" <ontarget1911@>
> wrote:
> > >
> > > Not sure if anyone has used one of these but this is what I am
> going
> > > to use for my ATS when I get around to building it. I have already
> > > gotten the enclosure and it is TOP NOTCH. AA-1 means
> alternative to
> > > Altoids Tin if someone wants something that is a bit more of a
> real
> > > enclosure. I am not knocking the Altoids method , I just wanted
> > > something a bit more sturdy and befitting of the price and
> performance
> > > of this rig. Now all I have to do is find someone to build it for
> me ;-
> > >)
> > > http://www.americanmorse.com/aa1.htm
> > > Jess AE0CW <><
> > >
> >
>
>
>

2457. Re: [AT_Sprint] Trouble with new ATS-3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-14 03:20:19 UTC
From: Steven Weber
Topic: 2454 Message: 2457

>As I was taking the voltage readings, I accidentally bumped the dash
>side of my paddle and the side tone came on and didn't stop. I found
>that if I hit the dot paddle, the side tone stopped. This observation
>alarmed me, because I thought that things were continuing to fail in
>the radio.

Some how the rig got into Tune mode, likely because the menu and then the split button got bumped while handling the board.

Intermitents like you discribe are usually caused by a missing solder connection. There is enough friction contact to make it work intially, then after a little handling, it goes open. Look at the DDS chip and associtated parts, including the clock oscillator.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2458. Re: ATS Enclosure

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-14 04:01:03 UTC
From: camqrp
Topic: 2423 Message: 2458

I put my ATS-3A in the AA-1 enclosure. The thicker walls of the hogged-out box did require a little more work than the Altoids box, but the end result is a very sturdy little radio.

To be able to get the connector end of the board close enough to the box wall so that the plugs would all seat properly, I had to resort to my Dremel tool with a small grinding wheel on it. Check out the pictures listed in the Photo file under the heading "N6GA's scope fotos".

I don't have the B model so I can't speculate on what issues might arise using this enclosure with it.

Cam N6GA

--- In AT_Sprint@yahoogroups.com, "deezulsmoke" <ontarget1911@...> wrote:
>
> Not sure if anyone has used one of these but this is what I am going
> to use for my ATS when I get around to building it. I have already
> gotten the enclosure and it is TOP NOTCH. AA-1 means alternative to
> Altoids Tin if someone wants something that is a bit more of a real
> enclosure. I am not knocking the Altoids method , I just wanted
> something a bit more sturdy and befitting of the price and performance
> of this rig. Now all I have to do is find someone to build it for me ;-
>)
> http://www.americanmorse.com/aa1.htm
> Jess AE0CW <><
>

2459. Re: [AT_Sprint] Re: ATS Enclosure

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-14 04:03:42 UTC
From: Steven Weber
Topic: 2423 Message: 2459

>have any of you come up with a solution for keeping the rig generally
>water resistant?

Personally I don't worry about it, but then I don't go to the beach or have a wet dog :-) On the trail, the rig is deep inside my pack and I make darn sure nothing inside my pack gets wet.

How about simply using a quart sized zip lock storage bag for those occasions when you might want to protect it from the elements? The bag can be mostly sealed, just needing a small opening to let the cables out of the side.

You can keep incidental grim out of the switch holes and possibly the jack holes by placing some thin felt over the switches. Wal-Mart sells some suitable matterial in the crafts department. For the switches, I just cut a small slit into the felt and push the switch post threw the slot.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2460. Re: [AT_Sprint] Re: ATS Enclosure

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-15 04:00:22 UTC
From: jess gypin
Topic: 2423 Message: 2460
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2461. QSBA

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-15 06:21:45 UTC
From: Tim Keene
Topic: 2461 Message: 2461

I have a question for Steve. Why is the max voltage input into the QSBA 15V? Is it because it will make the QSBA put out more than 12v to the ATS-x or is it to keep the regulators cooler? The reason I ask is because I put my ATS-3 and QSBA into one small box (one of those tin xmas boxes from Big Lots for less than $2 bucks), and I was planning on putting 12, 2700mahr "AA" batteries under the cover to make a completely self contained rig in one box. When the batteries are working at the nominal voltage of 1.2v each it is only 14.4v. But when they are freshly charged they are actually at about 1.4v each which would be 16.8V. From what I read it seems the LM-317 and 7805 can take that voltage no problem but I would like to make sure. I would like to find out what you and everyone else on the site think.
Tnx
Tim - K5DEZ

2462. Re: [AT_Sprint] QSBA

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-15 20:58:57 UTC
From: Steven Weber
Topic: 2461 Message: 2462

>would be 16.8V. From what I read it seems the LM-317 and 7805 can take
>that voltage no problem but I would like to make sure. I would like to
>find out what you and everyone else on the site think.

There is a cap across the DC in which is only rated for 16 volts, but 16.8
should not be a problem. I'd put a heat sink on the '317 too.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2463. Deaf AT-Sprint- Any Suggestions?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-16 03:50:53 UTC
From: kg0ew
Topic: 2463 Message: 2463

My little ATS-3A has been ambling to life for some time now. first had a bad U1 that needed replacment. Now its on the air, but with far less receive sensitivity than I expected.
I've completed the 40m and 30m band boards, both work, and Tx output is over 5w with 12V (measured with a LP-100 wattmeter). That would lead me to believe the band board is working well, except...
When I connect the antenna in directly to pin 1 of the band board, the receiver is much hotter (noisier too, but I can hear a lot of week signals I can't hear going through the filter).
I spent a lot of time tweaking CT2 and CT3, so I don't think it is as simple as peaking these two caps.
So... any ideas on what could be causing so my loss in receive, but not on transmit?
Thanks for any and all suggestions!
73,
David, KG0EW

2464. Re: QSBA

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-16 04:58:58 UTC
From: Tim Keene
Topic: 2461 Message: 2464

OK Steve, Tnx for the info. I'll add the heatsink to the '317 and if it makes me nervous I'll change the capacitor too.
Tnx
Tim - K5DEZ

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
>
> >would be 16.8V. From what I read it seems the LM-317 and 7805 can take
> >that voltage no problem but I would like to make sure. I would like to
> >find out what you and everyone else on the site think.
>
> There is a cap across the DC in which is only rated for 16 volts, but 16.8
> should not be a problem. I'd put a heat sink on the '317 too.
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com
>

2465. Re: QSBA

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-16 07:00:45 UTC
From: radio_kx0r
Topic: 2461 Message: 2465

--- In AT_Sprint@yahoogroups.com, "Tim Keene" <K5DEZ@...> wrote:

Tim,

If you really want 12V from your QBSA, it's easy. I posted a Word document in the FILES section here a long time ago about that. You'll need about 15V input to keep the regulator from dropping out of regulation with 12V out.

Have you thought about running the ATS rig off 8 or 9 cells, direct, without going through the adjustable regulator in the QBSA? The QBSA by itself will run fine from the lower voltage. This would raise the overall efficiency of the unit, and the weight would be reduced.

I think the only thing you would lose is the ability to reduce the voltage to the rig, to reduce the output. With a switch you could run in either mode - direct, or through the QBSA's regulator.

Don't run the ATS on 12 cells direct. That's too high.

I can't see adding 3 or 4 extra cells so you can waste 3V or more in the protection diode and the LM317T; but if you don't plan to carry it out on the trail, it really doesn't matter how you do it.

72/73
KX0R

> I have a question for Steve. Why is the max voltage input into the QSBA
> 15V? Is it because it will make the QSBA put out more than 12v to the
> ATS-x or is it to keep the regulators cooler? The reason I ask is
> because I put my ATS-3 and QSBA into one small box (one of those tin
> xmas boxes from Big Lots for less than $2 bucks), and I was planning on
> putting 12, 2700mahr "AA" batteries under the cover to make a
> completely self contained rig in one box. When the batteries are
> working at the nominal voltage of 1.2v each it is only 14.4v. But when
> they are freshly charged they are actually at about 1.4v each which
> would be 16.8V. From what I read it seems the LM-317 and 7805 can take
> that voltage no problem but I would like to make sure. I would like to
> find out what you and everyone else on the site think.
> Tnx

> Tim - K5DEZ
>

2466. Re: QSBA

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-16 16:15:51 UTC
From: Tim Keene
Topic: 2461 Message: 2466

Thanks for the additional info and I forgot there was a mod for the QBSA to make it go up to 12V. I'll take a look at it but probably will not do it....but who knows?? I have pretty much already done and/or considered all the possible combos for powering my ATS-3 before getting the QBSA. Now I'm just trying a few more since I now have both units installed in the same little box. Before getting the QBSA I pretty much always used my Planters cashew can (nothing but the best hi hi) which has 6 Hawker Cyclon 2.5AH batteries which are 2v each. When fully charged they generally stay up between 12.3 and 12.6 volts. It's alittle higher than Steve recommends but I have had no problems with it. Of course I always tune my antenna first with my MFJ analyzer so It never sees a high SWR. I still have the power connector on the ATS to plug in directly so I still have lots of options. Since I don't do any real trail hiking anymore, weight is not really a factor for me. I occasionally go out on day/picnic trips to where ever and throw up a long wire. Most of my QRP work is here at home anyway. It's a great change of pace and challenge from the 100w or more rigs.
73's and 72's
Tim - K5DEZ

--- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@...> wrote:
>
> --- In AT_Sprint@yahoogroups.com, "Tim Keene" <K5DEZ@> wrote:
>
> Tim,
>
> If you really want 12V from your QBSA, it's easy. I posted a Word
> document in the FILES section here a long time ago about that.
> You'll need about 15V input to keep the regulator from dropping out
> of regulation with 12V out.
>
> Have you thought about running the ATS rig off 8 or 9 cells,
direct,
> without going through the adjustable regulator in the QBSA? The
QBSA
> by itself will run fine from the lower voltage. This would raise
the
> overall efficiency of the unit, and the weight would be reduced.
>
> I think the only thing you would lose is the ability to reduce the
> voltage to the rig, to reduce the output. With a switch you could
> run in either mode - direct, or through the QBSA's regulator.
>

> Don't run the ATS on 12 cells direct. That's too high.
>
> I can't see adding 3 or 4 extra cells so you can waste 3V or more
in
> the protection diode and the LM317T; but if you don't plan to carry
> it out on the trail, it really doesn't matter how you do it.
>
> 72/73
> KX0R
>
> > I have a question for Steve. Why is the max voltage input into
the
> QSBA
> > 15V? Is it because it will make the QSBA put out more than 12v to
> the
> > ATS-x or is it to keep the regulators cooler? The reason I ask is
> > because I put my ATS-3 and QSBA into one small box (one of those
> tin
> > xmas boxes from Big Lots for less than $2 bucks), and I was
> planning on
> > putting 12, 2700mahr "AA" batteries under the cover to make a
> > completely self contained rig in one box. When the batteries are
> > working at the nominal voltage of 1.2v each it is only 14.4v. But
> when
> > they are freshly charged they are actually at about 1.4v each
which
> > would be 16.8V. From what I read it seems the LM-317 and 7805 can
> take
> > that voltage no problem but I would like to make sure. I would
like
> to
> > find out what you and everyone else on the site think.
> > Tnx
> > Tim - K5DEZ
> >
>

2467. QBSA

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-16 16:23:10 UTC
From: Tim Keene
Topic: 2467 Message: 2467

One more bit of info. I never have tweeked my coils to get full output pwr so the most my rig puts out on any of the bands is about 4w or less so the finals probably run cooler on the higher voltage.
Tim

2468. Re: [AT_Sprint] Deaf AT-Sprint- Any Suggestions?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-16 17:36:53 UTC
From: Steven Weber
Topic: 2463 Message: 2468

>had a bad U1 that needed replacment. Now its on the air, but with far
>less receive sensitivity than I expected.

There are two possabilities. One, the link and secondary turns on LF3 are reversed. This is a common problem. This is likely the problem if CT3 does not produce a peak in the tuning.

Second, there could be a problem with the QSK switches, likely a bad connection or damage to one of the 2N7002 fets when soldering. If you jumper pins 1 and 2 of the filter board socket, then put the antenna to pin 5 and receive sensitivity is still bad, then look at the connections to C47 and Q2.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2469. Connectors

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-17 04:44:34 UTC
From: Tim
Topic: 2469 Message: 2469

New guy question: So far in my short ham career I have built 3 kits - an OHR QRP wattmeter, a T-1 tuner (Elecraft), and the ATS-3B. All use different connectors. It seems to me that for QRP/portable ops it would make sense to standardize on one type to keep things simple. Do you folks use various types or do you try to stick with one kind? If just one, which and why?

Thanks es 72,

Tim KX3H

2470. Re: [AT_Sprint] Connectors

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-17 13:31:49 UTC
From: Kurt Savegnago
Topic: 2469 Message: 2470

Hi,

What do you mean? The connectors for the jacks and
such are pretty much the same on the little QRP kits.
The BNC connector for the antenna goes without saying
as it it small.

Kurt KC9LDH
--- Tim <bipetype@...> wrote:

> New guy question: So far in my short ham career I
> have built 3 kits -
> an OHR QRP wattmeter, a T-1 tuner (Elecraft), and
> the ATS-3B. All use
> different connectors. It seems to me that for
> QRP/portable ops it
> would make sense to standardize on one type to keep
> things simple. Do
> you folks use various types or do you try to stick
> with one kind? If
> just one, which and why?
>
> Thanks es 72,
>
> Tim KX3H
>
>
>
>
>
> Yahoo! Groups Links
>
>
>
>
>

Slackware user since 1994

2471. Carey's filter mods-3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-17 14:14:00 UTC
From: nn4cw
Topic: 2471 Message: 2471

Carey,
Other than durability and stiffness, was anything gained electronically with the use of thicker magnet wire on most of the toroids in the filter board?

BTW, I followed your suggestion of the two flow stage of constructing the main board. After pasting the passive components on the higher parts count side, I could see potential problems for me disturbing pasted resistors and caps while placing some of the IC's in the tight spots, especially after several cups of QRO coffee. It worked like a charm.
73, Gil NN4CW

2472. Looking for a builder

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-17 15:24:54 UTC
From: deezulsmoke
Topic: 2471 Message: 2472

I have an ATS-3 and also an ATS-3B and QBSA that I need to get built. The problem is that it takes most of the energy that I have to get the work done that I need to do for my part time home business. http://www.ontargetcgw.com. And no, gunsmiths are not rich, nothing could be further from the truth. Without the very kind donations of some hams time and equipment I would not even be on the air. With my back the way it is and living on SSDI, it does present some challenges. Especially since I used to build everything from K2s to Pixie IIs and every QRP kit in between. The problem is that I cannot sit for more than about 30-60 minutes at a time anymore at the workbench and that time has to be spent on the business to augment the SSDI. What I am looking for is a builder for the ATS-3 and or ATS-3B and QBSA. If you just had more fun than you can stand building your kit, then please get in touch with me about mine. We will see what we can work out for your time. I plan on building them into the American Morse AA1 Altoids super enclosures instead of the Altoids so drilling will be easier. Please contact me off line if you are interested in helping a ham that loves to operate QRP but building time and skills is waning.

Jess AE0CW <><

2473. AA1 Enclosure pics?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-17 15:28:40 UTC
From: jess gypin
Topic: 2473 Message: 2473
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2474. Re: Connectors

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-17 17:42:17 UTC
From: Tim
Topic: 2469 Message: 2474

I should have been more specific - I'm referring to the connections
from the radio to the antenna, including whatever is in between, like
a
tuner or wattmeter. The ATS uses an RCA connector. My wattmeter
uses
SO-239's. The T-1 tuner uses BNC.

Bear in mind I'm new at this. I have looked through a few books and
can't seem to find a guide as to whether the different types fit
different applications. It makes sense to me that the ATS uses an
RCA
connector because if the wire connected to it were inadvertantly
yanked, it would just come loose rather than ripping the jack out of
the Altoids tin. On the other hand, a BNC would be less likely to
come
loose by itself since it locks. Or...am I overthinking this and
should
just use whatever I have in my junk box?

Tnx.

Tim

--- In AT_Sprint@yahoogroups.com, Kurt Savegnago <ksaves2@...> wrote:
>
> Hi,
>
> What do you mean? The connectors for the jacks and
> such are pretty much the same on the little QRP kits.
> The BNC connector for the antenna goes without saying
> as it it small.
>
>

2475. Re: [AT_Sprint] Re: Connectors

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-17 17:55:04 UTC
From: Gil Stacy
Topic: 2469 Message: 2475
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2476. Re: [AT_Sprint] Re: Connectors

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-17 18:06:16 UTC
From: mstangelo@comcast.net
Topic: 2469 Message: 2476

Tim,

I have lots of portable QRP rigs and I've standardized on BNC connectors. They're small, qualified for RF and easy to insert and remove. They also come in crimp as well as screw on models and are made for al popular coax sizes - RG-174, RG-58, RG-59, RG-6, etc.

RCA connectors vary in quality and are not meant for multiple insertions and removals (the shield body may become intemittent as it spreads).

If you're concerned about yanking it loose, just insert the BNC without turning the bayonet lock.

73,

Mike N2MS

-------------- Original message --------------
From: "Tim" <bipetype@...>

> I should have been more specific - I'm referring to the connections
> from the radio to the antenna, including whatever is in between, like
> a
> tuner or wattmeter. The ATS uses an RCA connector. My wattmeter
> uses
> SO-239's. The T-1 tuner uses BNC.
>
> Bear in mind I'm new at this. I have looked through a few books and
> can't seem to find a guide as to whether the different types fit
> different applications. It makes sense to me that the ATS uses an
> RCA
> connector because if the wire connected to it were inadvertantly
> yanked, it would just come loose rather than ripping the jack out of
> the Altoids tin. On the other hand, a BNC would be less likely to
> come
> loose by itself since it locks. Or...am I overthinking this and
> should
> just use whatever I have in my junk box?
>
> Tnx.
>
> Tim
>
> --- In AT_Sprint@yahoogroups.com, Kurt Savegnago wrote:
> >
> > Hi,
> >
> > What do you mean? The connectors for the jacks and

> > such are pretty much the same on the little QRP kits.
> > The BNC connector for the antenna goes without saying
> > as it it small.

2477. Re: [AT_Sprint] Connectors

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-17 20:10:35 UTC
From: Mark Brueggemann
Topic: 2469 Message: 2477

--- Tim <bipetype@...> wrote:

> it would make sense to standardize on one type to keep
> things simple. Do you folks use various types or do you
> try to stick with one kind?

If I have a choice, (I'm retrofitting or assembling) I use SMA.
Otherwise BNC. You're right, if you don't settle on something
you're going to always have mismatched innies and outies, and
it's a real PITA to always need adapter cables or connectors.

Mark K5LXP
Albuquerque, NM

2478. Re: [AT_Sprint] Re: Connectors

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-17 20:39:59 UTC
From: John D'Ausilio
Topic: 2469 Message: 2478

What's a JRC connector??

de w1rt/john

On Dec 17, 2007 12:55 PM, Gil Stacy <gilstacy@...> wrote:
>
>
>
> Back when the Spartan Sprints had the Skinny and Tubby classification, I
> used JRC connectors on power and antenna to keep the weight down. My beef
> with BNC's in the altoids tins is keeping the nut tight. The twisting it
> takes to lock the connector torques it just enough to loosen the jack.
> Gil NN4CW

2479. Re: [AT_Sprint] Re: Connectors

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-17 22:20:16 UTC
From: john
Topic: 2469 Message: 2479

Me too, so I soldered the dude to the box!

John K5MO

At 12:55 PM 12/17/2007, you wrote:

>Back when the Spartan Sprints had the Skinny and Tubby classification, I
>used JRC connectors on power and antenna to keep the weight down. My beef
>with BNC's in the altoids tins is keeping the nut tight. The twisting it
>takes to lock the connector torques it just enough to loosen the jack.
>Gil NN4CW
>

2480. Re: [AT_Sprint] Re: Connectors

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-17 22:26:51 UTC
From: Gil Stacy
Topic: 2469 Message: 2480
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2481. Re: [AT_Sprint] Re: Connectors

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-17 22:28:14 UTC
From: n0tu/Steve
Topic: 2469 Message: 2481

Seems everyone has different needs and uses. Personally I prefer the RCAs for my trail gear as BNCs and SO239s just add unnecessary weight! But at home I use all three. So I keep adapters of all kinds around. Several folks have used BNCs instead of the RCA jack shipped with the kit ...Install your own flavor of connector?
Steve/n0tu

On Dec 17, 2007 10:42 AM, Tim <bipetype@...> wrote:
> I should have been more specific - I'm referring to the connections
> from the radio to the antenna, including whatever is in between, like
> a
> tuner or wattmeter. The ATS uses an RCA connector. My wattmeter
> uses
> SO-239's. The T-1 tuner uses BNC.
>
> Bear in mind I'm new at this. I have looked through a few books and
> can't seem to find a guide as to whether the different types fit
> different applications. It makes sense to me that the ATS uses an
> RCA
> connector because if the wire connected to it were inadvertantly
> yanked, it would just come loose rather than ripping the jack out of
> the Altoids tin. On the other hand, a BNC would be less likely to
> come
> loose by itself since it locks. Or...am I overthinking this and
> should
> just use whatever I have in my junk box?
>
> Tnx.
>
> Tim
>
> --- In AT_Sprint@yahoogroups.com, Kurt Savegnago <ksaves2@...> wrote:
> >
> > Hi,
> >
> > What do you mean? The connectors for the jacks and
> > such are pretty much the same on the little QRP kits.
> > The BNC connector for the antenna goes without saying
> > as it it small.
> >
> >
>
>
>
>

>
> Yahoo! Groups Links
>
>
>
>

2482. Re: Carey's filter mods-3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-17 23:38:40 UTC
From: radio_kx0r
Topic: 2471 Message: 2482

--- In AT_Sprint@yahoogroups.com, "nn4cw" <gilstacy@...> wrote:

Gil,

Glad to hear you got through the assembly!

I used mostly #26 wire for the many toroids for which #30 was supplied with the "B" kit. I did this for five reasons:

1) I like winding, stripping, and soldering #26 better.
2) The modules are vulnerable in the field, and #26 is more durable to accidental abuse.
3) Steve supplied #26 with the "A" kit for the same toroids.
4) #26 stays put better when you spread or tighten the turns.
5) The Q is higher with larger wire. Even on my Heath QM-1 I can see an improvement with #26 compared to #30, but it's not a big deal. I don't know if there's a significant effect on efficiency or power output. I was somewhat primed about this because I think I can feel a slight rise in temperature for some of the toroids on the higher frequency modules of my "A" kit, and they're done with #26. #30 won't be better.

I posted a detailed document describing my modifications to the modules here in the "FILES" section. All of you who're seeing low power on 40M should at least look at it. I think my notes will apply to either #26 or #30 wire - the spread of the turns can take care of the small differences in tuning.

The rig will deliver great performance on every band if you give those modules some TLC.

Carey Fuller
KX0R

> Carey,
> Other than durability and stiffness, was anything gained
> electronically with the use of thicker magnet wire on most of the
> toroids in the filter board?
>
> BTW, I followed your suggestion of the two flow stage of constructing
> the main board. After pasting the passive components on the higher
> parts count side, I could see potential problems for me disturbing
> pasted resistors and caps while placing some of the IC's in the tight
> spots, especially after several cups of QRO coffee. It worked like a
> charm.
> 73, Gil NN4CW
>

2483. Re: Connectors

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-18 00:09:58 UTC
From: radio_kx0r
Topic: 2469 Message: 2483

--- In AT_Sprint@yahoogroups.com, "Tim" <bipetype@...> wrote:

Tim,

I'll second most of what's already been said here about the RF connectors. I think Steve made a good choice with the RCA, because he wanted a trail radio with minimum weight. If you use BNC, the male BNC that connects to the radio adds significant weight; together a male and female BNC weigh more than 1 ounce. The RCA's are a small fraction of that. The torque required to mate the BNC's is excessive for the tin box. RCA plugs can be adjusted so you have the mating force you want.

Consider getting the optional BNC female jacks (OP-SB2) for your OHR WM-2. UHF connectors are too big for that meter. Most of us have accepted that UHF connectors (SO-239, PL-259) are mediocre at best. They're always a hassle.

Type N, BNC, SMA, and many other RF connectors all offer advantages and disadvantages. SMB would be a great QRP-portable connector, because it's tiny, and you just snap it on. Of course they cost more...

This link will give you something to think about. There are so many kinds of coaxial connectors that most of us can't keep track of them any more:

http://www.amphenolrf.com/products.asp?N=0&sid=4765BC007A52E17F&

Over time your collection of treasured coaxial adapters will grow. Almost any combination of sexes and connectors you can imagine is available these days.

72/73

Carey Fuller
KX0R

> New guy question: So far in my short ham career I have built 3 kits -
> an OHR QRP wattmeter, a T-1 tuner (Elecraft), and the ATS-3B. All
use
> different connectors. It seems to me that for QRP/portable ops it
> would make sense to standardize on one type to keep things simple.
Do
> you folks use various types or do you try to stick with one kind? If
> just one, which and why?
>
> Thanks es 72,
>

> Tim KX3H
>

2484. RE: [AT_Sprint] Looking for a builder

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-18 13:10:24 UTC
From: Dale Putnam
Topic: 2471 Message: 2484

Hi Jess,
Have you gotten all set up to get the ATs built?
--... ...--Dale - WC7S in Wy

To: AT_Sprint@yahoogroups.comFrom: ontarget1911@...ate: Mon, 17 Dec 2007 15:24:54 +0000Subject: [AT_Sprint] Looking for a builder

I have an ATS-3 and also an ATS-3B and QBSA that I need to get built. The problem is that it takes most of the energy that I have to get the work done that I need to do for my part time home business. http://www.ontargetcgw.com. And no, gunsmiths are not rich, nothing could be further from the truth. Without the very kind donations of some hams time and equipment I would not even be on the air. With my back the way it is and living on SSDI, it does present some challenges. Especially since I used to build everything from K2s to Pixie IIs and every QRP kit in between. The problem is that I cannot sit for more than about 30-60 minutes at a time anymore at the workbench and that time has to be spent on the business to augment the SSDI. What I am looking for is a builder for the ATS-3 and or ATS-3B and QBSA. If you just had more fun than you can stand building your kit, then please get in touch with me about mine. We will see what we can work out for your time. I plan on building them into the American Morse AA1 Altoids super enclosures instead of the Altoids so drilling will be easier. Please contact me off line if you are interested in helping a ham that loves to operate QRP but building time and skills is waning.Jess AE0CW <><

_____
Get the power of Windows + Web with the new Windows Live.
http://www.windowslive.com?ocid=TXT_TAGHM_Wave2_powerofwindows_122007

2485. Re: [AT_Sprint] Re: Connectors

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-18 14:20:58 UTC
From: Michael Harnage
Topic: 2469 Message: 2485

I think the intent was a JST connector. Google "JST RC
hobby" :)

-mike/w1mt

--- John D'Ausilio <jdausilio@...> wrote:

> What's a JRC connector??
>

Be a better friend, newshound, and
know-it-all with Yahoo! Mobile. Try it now.
http://mobile.yahoo.com/;_ylt=Ahu06i62sR8HDtDypao8Wcj9tAcJ

2486. Re: [AT_Sprint] Re: Connectors

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-18 14:39:34 UTC
From: Gil Stacy
Topic: 2469 Message: 2486
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2487. Wider passband for 3B?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-18 15:22:34 UTC
From: mpupeza
Topic: 2487 Message: 2487

Is there an easy way to widen the audio passband for easier
listening
- temporarily?
My crystals must have been a good batch,because my audio passband is
200Hz at 6 dB and 400Hz at 20 dB. I'm finding it kind of tinny, or
almost ringing and hard listening while scanning.
Can I put a jumper, or small switch with some component, accessible
from the band filter side, to make the audio wider?
Then, when needed, just pull a jumper, or a miniswitch to make it
normal again!
But, WOW, what a hot receiver! ANYTHING that I can hear with my IC-
703 is good in the ATS-3B.
73
Mike VE3EQP/W4.....>

2488. Re: [AT_Sprint] Wider passband for 3B?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-18 18:08:33 UTC
From: jess gypin
Topic: 2487 Message: 2488
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2489. New file uploaded to AT_Sprint

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-18 19:16:59 UTC
From: AT_Sprint@yahoogroups.com
Topic: 154 Message: 2489

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the AT_Sprint
group.

File : /Audio scan.jpg
Uploaded by : mpupeza <mpupeza@...>
Description : Spectogram of noise in ATS-3B - VE3EQP

You can access this file at the URL:
http://groups.yahoo.com/group/AT_Sprint/files/Audio%20scan.jpg

To learn more about file sharing for your group, please visit:
http://help.yahoo.com/l/us/yahoo/groups/original/members/web/index.htmlfiles

Regards,

mpupeza <mpupeza@...>

2490. Wire size?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-18 20:25:18 UTC
From: Tiana
Topic: 2490 Message: 2490

Looking over resent messages about changing the wire size from 30 to 26 on some toroids I wonder if can use a different wire size in a current project I messed up. I bought a 40 m tunner upper kit from Norcal. Since I'm very new to kit making I wanted to have some experience with smt soldering before I built my ATS 3B. And I wante to be able to tune without having to use the rig. I soldered in one of the toriods in the kit wrong and when I desoldered I broke the wire. I'm pretty sure the wire is size 28 because I compared it with the 30 and 26 wire I have. I've ordered #28 wire but I haven't gotten it yet. Could I rewind the toroid with 30 or 26 wire? Or should I wait until the #28 wire arrives?

Thanks,

Tiana KE5ODX

2491. Re: [AT_Sprint] Wider passband for 3B?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-18 20:28:48 UTC
From: Hank Greeb
Topic: 2487 Message: 2491

I'll do you 2 better. I'd trade my original ATS (no suffix) for the
built 3B. :) :)

jess gypin wrote:
> Yeah! I could trade you my ATS-3 for your built 3B :-)
>
> Jess AE0CW <><
>
>
> On 12/18/07, *mpupeza* <mpupeza@...
> <mailto:mpupeza@...>> wrote:
>
> Is there an easy way to widen the audio passband for easier
> listening
> - temporarily?
> My crystals must have been a good batch,because my audio passband is
> 200Hz at 6 dB and 400Hz at 20 dB. I'm finding it kind of tinny, or
> almost ringing and hard listening while scanning.
> Can I put a jumper, or small switch with some component, accessible
> from the band filter side, to make the audio wider?
> Then, when needed, just pull a jumper, or a miniswitch to make it
> normal again!
> But, WOW, what a hot receiver! ANYTHING that I can hear with my IC-
> 703 is good in the ATS-3B.
> 73
> Mike VE3EQP/W4.....
>
>

2492. Re: [AT_Sprint] Wider passband for 3B?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-18 21:41:30 UTC
From: Kurt Savegnago
Topic: 2487 Message: 2492

Eeeeeeee,

That's the one that only 50 kits were ever made? ;-)

Kurt
--- Hank Greeb <n8xx@...> wrote:

> I'll do you 2 better. I'd trade my original ATS (no
> suffix) for the
> built 3B. :) :)
>
> jess gypin wrote:
> > Yeah! I could trade you my ATS-3 for your built 3B
> :-)
> >
> > Jess AE0CW <><
> >
> >
> > On 12/18/07, *mpupeza* <mpupeza@...
> > <mailto:mpupeza@...>> wrote:
> >
> > Is there an easy way to widen the audio
> passband for easier
> > listening
> > - temporarily?
> > My crystals must have been a good
> batch,because my audio passband is
> > 200Hz at 6 dB and 400Hz at 20 dB. I'm finding
> it kind of tinny, or
> > almost ringing and hard listening while
> scanning.
> > Can I put a jumper, or small switch with some
> component, accessible
> > from the band filter side, to make the audio
> wider?
> > Then, when needed, just pull a jumper, or a
> miniswitch to make it
> > normal again!
> > But, WOW, what a hot receiver! ANYTHING that I
> can hear with my IC-
> > 703 is good in the ATS-3B.
> > 73
> > Mike VE3EQP/W4.....
> >
> >
>

>
>
> Yahoo! Groups Links
>
>
>
>
>

Slackware user since 1994

2493. Re: Wire size?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-19 00:44:09 UTC
From: radio_kx0r
Topic: 2490 Message: 2493

--- In AT_Sprint@yahoogroups.com, Tiana <tiana222@...> wrote:

Tiana,

For that kit you may be OK to substitute #30 instead of #28 wire. If it's one of the toroids with the primary and secondary, T1 or T2, going to smaller wire should work OK. I'm not sure whether #26 would fit, however. I have this kit also.

If the toroid in question is L1, better stick with the original wire, since that one is a specific inductance for a tuned filter, unless you have some way to measure it.

You could try it and later correct it with #28, as long as you use no glue.

72/73

Carey Fuller
KX0R

> Looking over resent messages about changing the wire size from 30 to 26 on some toroids I wonder if can use a different wire size in a current project I messed up. I bought a 40 m tunner upper kit from Norcal. Since I'm very new to kit making I wanted to have some experience with smt soldering before I built my ATS 3B. And I wante to be able to tune without having to use the rig. I soldered in one of the toriods in the kit wrong and when I desoldered I broke the wire. I'm pretty sure the wire is size 28 because I compared it with the 30 and 26 wire I have. I've ordered #28 wire but I haven't gotten it yet. Could I rewind the toroid with 30 or 26 wire? Or should I wait until the #28 wire arrives?
>
> Thanks,
>
> Tiana KE5ODX
>

2494. Re: [AT_Sprint] Wire size?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-19 12:04:27 UTC
From: john
Topic: 2490 Message: 2494

Should make virtually no difference, as long as you can fit the turns on
the core! Try 26 first!

John K5MO

At 03:25 PM 12/18/2007, you wrote:
>Looking over resent messages about changing the wire size from 30 to 26 on
>some toroids I wonder if can use a different wire size in a current
>project I messed up. I bought a 40 m tunner upper kit from Norcal. Since
>I'm very new to kit making I wanted to have some experience with smt
>soldering before I built my ATS 3B. And I wante to be able to tune without
>having to use the rig. I soldered in one of the toriods in the kit wrong
>and when I desoldered I broke the wire. I'm pretty sure the wire is size
>28 because I compared it with the 30 and 26 wire I have. I've ordered #28
>wire but I haven't gotten it yet. Could I rewind the toroid with 30 or 26
>wire? Or should I wait until the #28 wire arrives?
>
>Thanks,
>
>Tiana KE5ODX
>
>
>
>Yahoo! Groups Links
>
>
>

2495. Re: Wider passband for 3B?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-19 16:31:03 UTC
From: mpupeza
Topic: 2487 Message: 2495

Guys;
I haven't had any real responses from the group yet!
I've tried shorting X4 and X3 and bypassing them with a 680 pF cap, but neither of those helped. Just put humps in the passband. Maybe a resistor from C4 to C8? Or a cap?
I've posted a spectogram picture of my bandwidth in the Files section, so you can see how narrow this guy is! Great for crowded conditions, but hard to listen to for me! I'll try a few more things, but any help would be appreciated.
Thanks.
73
Mike VE3EQP/W4 .....>

In AT_Sprint@yahoogroups.com, "mpupeza" <mpupeza@...> wrote:
>
> Is there an easy way to widen the audio passband for easier
> listening - temporarily?
> My crystals must have been a good batch,because my audio passband is 200Hz at 6 dB and 400Hz at 20 dB. I'm finding it kind of tinny, or
> almost ringing and hard listening while scanning.
> Can I put a jumper, or small switch with some component, accessible
> from the band filter side, to make the audio wider?

2496. Re: [AT_Sprint] Re: Wider passband for 3B?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-19 16:34:57 UTC
From: Michael Harnage
Topic: 2487 Message: 2496

You could try bypassing all 4 IF crystals ala the ATS3
BUT since the current design is setup to match the
input/output impedances for the IF filter, you likely
will get strange results.

-mike/w1mt

--- mpupeza <mpupeza@...> wrote:

> Guys;
> I haven't had any real responses from the group yet!
>
> I've tried shorting X4 and X3 and bypassing them
> with a 680 pF cap,
> but neither of those helped. Just put humps in the
> passband. Maybe a
> resistor from C4 to C8? Or a cap?
> I've posted a spectogram picture of my bandwidth in
> the Files
> section, so you can see how narrow this guy is!
> Great for crowded
> conditions, but hard to listen to for me! I'll try a
> few more things,
> but any help would be appreciated.
> Thanks.
> 73
> Mike VE3EQP/W4 .....>
>
>
>

Never miss a thing. Make Yahoo your home page.
http://www.yahoo.com/r/hs

2497. Re: Wider passband for 3B?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-19 23:35:39 UTC
From: radio_kx0r
Topic: 2487 Message: 2497

--- In AT_Sprint@yahoogroups.com, "mpupeza" <mpupeza@...> wrote:
Mike,

I found that the audio sounds better if you run into higher impedance phones, or a resistive pad, rather than the low-Z phones. The lower the load impedance on the audio stage, the sharper it gets.

I did some tests to prove this. The resonant frequency also shifts up a bit as the load Z goes down. It's no big deal.

Carey
KX0R

> Guys;
> I haven't had any real responses from the group yet!
> I've tried shorting X4 and X3 and bypassing them with a 680 pF cap,
> but neither of those helped. Just put humps in the passband. Maybe
a
> resistor from C4 to C8? Or a cap?
> I've posted a spectogram picture of my bandwidth in the Files
> section, so you can see how narrow this guy is! Great for crowded
> conditions, but hard to listen to for me! I'll try a few more
things,
> but any help would be appreciated.
> Thanks.
> 73
> Mike VE3EQP/W4 .....>
>
>
>
>
>
> In AT_Sprint@yahoogroups.com, "mpupeza" <mpupeza@> wrote:
> >
> > Is there an easy way to widen the audio passband for easier
> > listening - temporarily?
> > My crystals must have been a good batch,because my audio passband
> is 200Hz at 6 dB and 400Hz at 20 dB. I'm finding it kind of tinny,
or
> > almost ringing and hard listening while scanning.
> > Can I put a jumper, or small switch with some component,
> accessible
> > from the band filter side, to make the audio wider?
>

2498. Building my 2nd B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-20 00:53:17 UTC
From: w1mt
Topic: 2498 Message: 2498

Here is a little story of building my second B. I again used the hot air method and it is the only way to go as far as I am concerned. Highly recommended. I did the most populated side of the board first this time and it went well. Had a few solder bridges that I took care of real quick with braid.

Powered up and found that some of the leds on the display did not light up. Hmmmmm. Power seemed adequate so check the mpu port pins and sure enough a couple of the legs of the mpu were up off the board. Note to self make sure that the legs are parallel in the same plane next time -- perhaps this was a results of opening the packages too fast. Reflowed the mpu with the embossing gun and got those pins all down and looking nice. Repower and now all I hear is a steady whoosh but no sidetone or led display. Hmmmmm. Reinspect the mpu to make sure that each pin is down. Check looks good. Start checking voltages on the led port pins. All looks good. Ok, now start at pin 1 of the MPU and check each pin. Wow, one of the crystal ports is at ground. Not good. Inspection of the crystal reveals that I left the leads too short and the case was shorting to the hole ring around one for of the holes. Try to raise the crystal a little and it works. Led lights and sidetone rings, very nice. Put the wire holddown back on and power up and just a steady whoosh. Darn, pushed the crystal case back onto the ring again shorting one side of the crystal again. Worked on it some more trying to get some more separation between the case and the hole ring but worked it too much and broke the lead at the crystal. Thanks to Steve I got a replacement and put it in tonight and it works FB again. Thanks again Steve!

Moral of the story: Leave those crystal leads a little long so the case doesn't short one of the leads. :)

Have a very Merry Christmas.

-mike/w1mt

2499. Re: [AT_Sprint] Building my 2nd B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-20 02:50:34 UTC
From: jess gypin
Topic: 2498 Message: 2499
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2500. Re: [AT_Sprint] Wider passband for 3B?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-20 03:49:09 UTC
From: Steven Weber
Topic: 2487 Message: 2500

Junpering out crystals in the filter does little but make the opposite sideband rejection less. Reducing the value of the caps to ground between the crystals would be the best bet. The one in series with the RFC to the 1st mixer is series resonante at 5 MHz, so if you change that cap, the RFC value should be changed also to keep it series resonate at the IF frequency.

Also, changing the cap values will shift the center frequency of the filter, so it will have to be recalibrated to put the IF frequency in the ideal spot.

4.915 MHz filters are inherently fairly narrow and the cyrstals are matched to +/- 10 Hz or better.

The audio filter by its self isn't too narrow, its primary job is to eliminate hiss and lows.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2501. Re: Wider passband for 3B?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-20 05:50:36 UTC
From: radio_kx0r
Topic: 2487 Message: 2501

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
Steve,

Thanks for this insight. I think the crystal filter is just perfect for what we use the rig for. Everyone has some personal preference, but I think it's nice.

The audio passband sharpens when a low-Z load, like 8 ohms, is connected to the headphone amp. Some small headphones are this low with both elements connected in parallel.

The resonant frequency of the audio peak also shifts up about 50 or 60 hz, just enough to notice, as the audio load is varied down from 100 ohms to 30 ohms or lower. The audio load can be a pure resistor, and the effect is the same as with phones. I measured it with an audio generator and an AC voltmeter; that eliminates crystal filter effects.

It's not clear to me why this happens. Most people who measure the rig with Spectrogram use a high-Z load, so they miss the effect.

I decided to like it rather than fight it. The additional audio selectivity is OK for weak signals, and when the signals are strong, my inline volume control raises the audio load to about 100 ohms, so the peaking is reduced.

I'm curious whether you see this peaking and shift if you measure your rig's audio passband with a really low Z audio load. Both my ATS-3A and ATS-3B have the same effect.

This just isn't a big deal - it's just a little thing some of us have wondered about. Maybe someone will tell us about some higher-Z headphones that work better than what we use.

I did learn that the headphone elements should not be put in series to create a higher-Z combination - they will be out of phase unless you rewire the headset. Out of phase audio sounds odd, more spread out, than in phase, which is more centered. Wiring some phones for series, in phase operation is a possibility to try some time.

The QBSA eliminates the effect, as you would expect, because it's a high-Z audio load!

72/73

Carey Fuller
KX0R

> Junpering out crystals in the filter does little but make the
opposite
> sideband rejection less. Reducing the value of the caps to ground
between
> the crystals would be the best bet. The one in series with the RFC
to the
> 1st mixer is series resonante at 5 MHz, so if you change that cap,
the RFC
> value should be changed also to keep it series resonate at the IF
frequency.
>
> Also, changing the cap values will shift the center frequency of the
> filter, so it will have to be recalibrated to put the IF frequency
in the
> ideal spot.
>
> 4.915 MHz filters are inherently fairly narrow and the cyrstals are
matched
> to +/- 10 Hz or better.
>
> The audio filter by its self isn't too narrow, its primary job is to
> eliminate hiss and lows.
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com
>

2502. Re: Building my 2nd B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-20 16:21:26 UTC
From: jer terez
Topic: 2498 Message: 2502
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2503. Re: Building my 2nd B; kester link

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-20 16:36:03 UTC
From: jerry
Topic: 2498 Message: 2503

in the kester link there seems to be an extra unneeded "\" between "f"
and "ree"

2504. Re: [AT_Sprint] Re: Building my 2nd B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-20 17:07:50 UTC
From: Michael Harnage
Topic: 2498 Message: 2504

Comments inline below...

--- jer terez <ohwenzelph@...> wrote:
> i don't know
> if one syringe will do a whole ats3b board. i am
> pretty sure 2 would be more than enough.
>

A syringe from Cash Olsen will be enough to complete 3
or 4 ATS rigs.

> with the ats3b in particular i don't know, and
> wonder,
> how well the led display tolerates hand held hot air
> soldering or if other people are soldering taller
> parts like electrolytic caps that way. i would do
> all
> the surface mount parts on both sides before any of
> the through the hole parts.

The led display is fine to use the hot air on. I have
done two that way with no problem.

All thru hole parts are done the old fashioned way
with iron and solder.

-mike/w1mt

Never miss a thing. Make Yahoo your home page.
http://www.yahoo.com/r/hs

2505. Re: Wider passband for 3B?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-20 17:58:58 UTC
From: radio_kx0r
Topic: 2487 Message: 2505

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:

Steve,

I measured the audio passband of my ATS-3B. Audio was injected through a 100 uf cap at TP2. The level was set to produce a maximum level of about .08V RMS at the headphone jack output. I believe this level is below the AGC threshold. The frequency was varied, and the output was measured across the audio passband from 200 to 1600 Hz. Data were taken for three load conditions at the output: Hi-Z, 51 ohms, and 10 ohms.

The injection level was chosen to create an output reading corresponding to 0 db on the HP400D meter at the audio bandpass peak. All readings were taken in db relative to that level. The db readings were plotted on a graph.

My ATS-3B has 560 pf NPO caps added to C20 and C21. These lower the peak frequency of the audio passband slightly. This is the only mod to the audio chain.

With a Hi-Z load my peak frequency is about 590 Hz, the 3 db bandwidth is about 130 Hz, the 10 db bandwidth is about 375 Hz, and the Q is about 4.5.

With a 10 ohm load my audio peak is at about 640 Hz, the 3 db bandwidth is about 107 Hz, the 10 db bandwidth is about 330 Hz, and the Q is about 6.

The results for the 51 ohm load are in between these two sets - I never plotted them.

So the audio peak shifts up in frequency when Lo-Z phones are used, it sharpens somewhat, but it's no big deal. Just an interesting effect some of us can hear. I have a hunch that L6 may play a part in this effect.

Others may want to try increasing C20 and C21 to lower the center audio frequency. Some operators prefer a lower tone. I did this so I'd be closer to 600 Hz. With no added caps I was close to 700 Hz when using low-Z phones, and that's near the side of the IF passband. I sure like the sound I ended up with. Perhaps the tolerances for C20 and C21 allow some variation.

Carey Fuller
KX0R

> Junpering out crystals in the filter does little but make the
opposite
> sideband rejection less. Reducing the value of the caps to ground
between
> the crystals would be the best bet. The one in series with the RFC
to the
> 1st mixer is series resonante at 5 MHz, so if you change that cap,
the RFC
> value should be changed also to keep it series resonate at the IF
frequency.
>
> Also, changing the cap values will shift the center frequency of the
> filter, so it will have to be recalibrated to put the IF frequency
in the
> ideal spot.
>
> 4.915 MHz filters are inherently fairly narrow and the cyrstals are
matched
> to +/- 10 Hz or better.
>
> The audio filter by its self isn't too narrow, its primary job is to
> eliminate hiss and lows.
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com
>

2506. Filter Module Storage Breakthrough

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-20 20:50:58 UTC
From: radio_kx0r
Topic: 2506 Message: 2506

All,

Everyone with an ATS rig has found ways to store and carry the filter modules. Some ways are better than others.

Recently I ordered some tin boxes from Specialty Bottle Supply.

http://www.specialtybottle.com/index.asp

K6JF brought this supplier to our attention. They are easy to deal with, do small orders, take PayPal, etc.

They sell a THN4 box similar to the Altoids tin for $0.64 each. When I ordered some of these for future projects, I ordered some smaller THN2 boxes as well.

The THN2 is a rectangular tin 2.5" by 2". The bottom and top are convex, and it has a hinged lid with a snap catch like the Altoids box. These also cost $0.64 each in small quantity.

Today I discovered that four ATS-3B filter modules will fit inside one of these tins. The lid snaps perfectly, and the fit is so good that there's almost no rattle.

It's a nice puzzle to figure out how to fit them in. The key is that the boards lie back-to-back, so any rubbing happens on the soldered side. The header pins point into the bottom and top of the tin, so they won't damage other modules. I don't think there's much room for padding, but it might be possible to add a little thin felt or foam to reduce rattling. The fit is so perfect it's like the tin was made for our modules. The THN2 tin with four modules weighs about 1-1/2 ounces.

If you carry less than four modules in the tin you'll definitely need some padding.

For my ATS-3A I went to some trouble to mount three filter modules in the lid of the rig's Altoids box. The fit's nice, but changing filters takes longer than I like. The THN2 is a MUCH better solution. It's made for the job.

I also ordered a larger tin called THN8. These have a clear window, measure 5.25" X 3.38" X about .8". One of these would hold an ATS rig, a tuner, filter modules, or maybe batteries, etc. They look nice and only cost $.80 each. These should interest people who want more stuff in one box.

Steve, maybe you could put that SSB rig in one of these!

72/73

Carey Fuller
KX0R

2507. Pin-out of U5

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-20 23:01:22 UTC
From: nn4cw
Topic: 2507 Message: 2507

In measuring voltages on U5, I used what I thought was convention and counted CCW from the corner of the IC in the lower left hand corner with the writing on the IC properly oriented for reading. This I thought was pin 1. Most of readings were off what was specified in the manual for the first run. However, the readings were close to the specs, but not in corresponding order. I checked the readings on one of my ATS3's U5 (or equivalent) and they approximately corresponded with the readings on the Bee's U5. I searched in the archives and found a reference that the order of pins differed in this IC from conventional, but I didn't see the proper order. Could someone please give me a heads-up on the correct order for future reference? Tnx.
73, Gil

2508. New file uploaded to AT_Sprint

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-20 23:21:22 UTC
From: AT_Sprint@yahoogroups.com
Topic: 154 Message: 2508

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the AT_Sprint
group.

File : /ATS-3B Audio Plot.pdf
Uploaded by : radio_kx0r <careyfuller@...>
Description : Audio Response of ATS-3B

You can access this file at the URL:
http://groups.yahoo.com/group/AT_Sprint/files/ATS-3B%20Audio%20Plot.pdf

To learn more about file sharing for your group, please visit:
http://help.yahoo.com/l/us/yahoo/groups/original/members/web/index.htmlfiles

Regards,

radio_kx0r <careyfuller@...>

2509. RE: [AT_Sprint] Pin-out of U5

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-20 23:26:45 UTC
From: Rob May
Topic: 2507 Message: 2509

Gil,
It's number conventionally. Here's a link to the datasheet:
http://focus.ti.com/lit/ds/symlink/sn74lvc1g3157.pdf

On the ATS-3 board it looks like this (with power, phone and key jacks to the left):

_
1| |6
2| |5
3|_|4

73,
Rob
NV5E

_____
To: AT_Sprint@yahoogroups.com
From: gilstacy@...
Date: Thu, 20 Dec 2007 23:01:22 +0000
Subject: [AT_Sprint] Pin-out of U5

In measuring voltages on U5, I used what I thought was convention and

counted CCW from the corner of the IC in the lower left hand corner

with the writing on the IC properly oriented for reading. This I

thought was pin 1. Most of readings were off what was specified in the

manual for the first run. However, the readings were close to the

specs, but not in corresponding order. I checked the readings on one

of my ATS3's U5 (or equivalent) and they approximately corresponded

with the readings on the Bee's U5. I searched in the archives and

found a reference that the order of pins differed in this IC from

conventional, but I didn't see the proper order. Could someone please

give me a heads-up on the correct order for future reference? Tnx.

73, Gil

_____
Don't get caught with egg on your face. Play Chicktionary!
http://club.live.com/chicktionary.aspx?icid=chick_wlhmtextlink1_dec

2510. Re: New file uploaded to AT_Sprint

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-20 23:36:11 UTC
From: radio_kx0r
Topic: 154 Message: 2510

--- In AT_Sprint@yahoogroups.com, AT_Sprint@yahoogroups.com wrote:

For those of you who're interested, I just uploaded a graph of the audio response of my ATS-3B into the FILES section of this site. One file is the whole graph, with curves for a high-Z audio load and also for a 10-ohm audio load.

The "Detail" file is a zoom-in of the interesting part of the graph.

My ATS-3B has 560 pf of additional capacitance across audio filter caps C20 and C21 (both nominal .01 uf), which lowers the audio bandpass center frequency a little bit. The effects shown in the graph occur with or without the additional capacitance.

Steve may never see these because the files are large - sorry Steve. The summary in my previous message today applies to these curves.

72/73

Carey Fuller
KX0R

> Hello,
>
> This email message is a notification to let you know that
> a file has been uploaded to the Files area of the AT_Sprint
> group.
>
> File : /ATS-3B Audio Plot.pdf
> Uploaded by : radio_kx0r <careyfuller@...>
> Description : Audio Response of ATS-3B
>
> You can access this file at the URL:
> http://groups.yahoo.com/group/AT_Sprint/files/ATS-3B%20Audio%
20Plot.pdf
>
> To learn more about file sharing for your group, please visit:
>
http://help.yahoo.com/l/us/yahoo/groups/original/members/web/index.htm
lfiles
>
> Regards,
>
> radio_kx0r <careyfuller@...>
>

2511. Re: [AT_Sprint] Pin-out of U5

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-20 23:44:27 UTC
From: Gil Stacy
Topic: 2507 Message: 2511
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2512. Non SMT Equivalent for a 612 Mixer?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-20 23:42:42 UTC
From: Hank Greeb
Topic: 2507 Message: 2512

Is there an electrically equivalent device for the NE-612 mixer which
fits in a standard DIP socket?

Yes, I know it's heresy, but......

72/73 de n8xx Hg

2513. Re: [AT_Sprint] Pin-out of U5

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-20 23:47:35 UTC
From: Gil Stacy
Topic: 2507 Message: 2513
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2514. RE: [AT_Sprint] Pin-out of U5

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-21 00:19:04 UTC
From: Rob May
Topic: 2507 Message: 2514

Oops, my bad Gil. From the original post, I thought he was talking about u5 on the ATS-3.
Ok, here's what the datasheet says, but it doesn't agree with what's in the 'B manual troubleshooting section.
http://www.ortodoxism.ro/datasheets/panasonic/SDE00002CEB.pdf

3 4 5

____
|___|
2 1

Pin
1 Vcc
2 Det
3 Input
4 Gnd
5 Output

My 'B (with no antenna connected):
1 4.97
2 0
3 2.46
4 0
5 1.28
Seems to agree with datasheet

Manual says:
1 Audio in 1.3
2 Gnd 0
3 Audio out .96
4 Vagc (Det) .34
5 Vcc 5.0

I hope this is more helpful than confusing.
73,
Rob

To: AT_Sprint@yahoogroups.com
From: gilstacy@...
Date: Thu, 20 Dec 2007 18:47:35 -0500
Subject: Re: [AT_Sprint] Pin-out of U5

Rob,

U5 on Bee. U4 on ATS3. The one with AC on it.

Gil

Get the power of Windows + Web with the new Windows Live.
http://www.windowslive.com?ocid=TXT_TAGHM_Wave2_powerofwindows_122007

2515. Re: [AT_Sprint] Non SMT Equivalent for a 612 Mixer?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-21 00:22:41 UTC
From: michael taylor
Topic: 2507 Message: 2515

On Dec 20, 2007 6:42 PM, Hank Greeb <n8xx@...> wrote:
> Is there an electrically equivalent device for the NE-612 mixer which
> fits in a standard DIP socket?

NXP (Philips) SA602AN and SA612AN available from Digikey and Newark
Digikey: 568-2089-5-ND - 1.85 each in singles
Newark: 69C4673 - $3.42

-Michael, VE3TIX

2516. Re: [AT_Sprint] Non SMT Equivalent for a 612 Mixer?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-21 00:28:03 UTC
From: michael taylor
Topic: 2507 Message: 2516

On Dec 20, 2007 7:22 PM, michael taylor <mctylr@...> wrote:
>
> NXP (Philips) SA602AN and SA612AN available from Digikey and Newark
> Digikey: 568-2089-5-ND - 1.85 each in singles
> Newark: 69C4673 - $3.42

And Future Electronics' "Component Superstore",
<http://www.componentsuperstore.com/>
SA612AN/01 - $1.26 each
SA602AN - $1.50 each

-Michael, VE3TIX

2517. Re: [AT_Sprint] Pin-out of U5

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-21 00:29:44 UTC
From: Gil Stacy
Topic: 2507 Message: 2517
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2518. Wanted: recipe for German Stoolun

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-21 01:05:30 UTC
From: Steven Weber
Topic: 2487 Message: 2518

One of my fondest childhood memories of Christmas is that of eating the freash baked German Stoolun (I'm sure I'm not spelling that right, but thats how is sounds!) that my mother used to make. I used to love that bread, almost as much as the Snickerdoole cookies.

I was wondering if one of our German friends here could post the recipe? I'd like to try and make one :-) For those who wonder what this is, its a bread with friuts and nuts baked into it and topped with powdered suger. Sort of like a friut cake, but much better.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2519. Re: [AT_Sprint] Wanted: recipe for German Stoolun

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-21 01:25:51 UTC
From: Kurt Savegnago
Topic: 2487 Message: 2519

Hi,

The name is Stollen for the German Christmas cake.
I have no recipe but you might be able to find it
in a store.
One of my co-workers mother makes a mean German
fruit cake that is nothing like the garbage fruit
cakes
comedians joke about. Her grandmother brought the
secret recipe over from Germany. I was surprised when
I heard she made fruit cakes instead of Stollen.

Kurt KC9LDH

Slackware user since 1994

2520. German Stollen

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-21 01:24:56 UTC
From: W4WLC
Topic: 2520 Message: 2520

I am not German but I found the recipe.
☐
Merry Christmas,
73,

W4WLC
Dave

1 1/2 cups raisins
1 cup golden raisins
1 cup candied fruit
1 cup chopped blanched almonds
1/2 cup dark rum
2 envelopes dried powdered yeast
1/2 cup lukewarm water
2 cups milk
1 teaspoon salt
1 tablespoon butter
Grated rind of 1 orange
6 - 7 cups flour
1/2 teaspoon nutmeg
1 teaspoon cardamom
4 eggs, lightly beaten
1 cup sugar
1/2 cup melted butter to brush over dough
Confectioner's sugar to dust top of dough

METHOD
Night before: Soak raisins, candied fruit and almonds in rum. Keep at room temperature. In the morning, drain and set aside, reserving rum.
Dissolve yeast in warm water.
Scald milk with 1 tablespoon sugar, salt, butter and orange zest. Stir in rum. Cool to lukewarm.
Sift together flour, nutmeg and cardamom.
When milk has cooled, stir in yeast and 2 cups of flour. Mix well and set in warm draft-free place for 15 - 30 minutes.
Stir in lightly beaten eggs and sugar. Gradually mix in remaining 4 to 5 cups flour. Dough should be soft, but not sticky, just dry enough to be handled. Knead dough on a floured work surface for 5 minutes.
Place dough in lightly greased bowl, cover and put in draft-free spot until doubled in bulk, about 2 hours.
Punch dough down, return to floured work surface and add dried fruit and nuts, and work into dough while kneading. Fruits and nuts should be evenly worked into dough. Knead until dough is smooth and elastic.
Cut into three equal pieces. Roll or flatten each piece into an oval 3/4 inch thick, pinching the ends to close.

Brush top of each with melted butter and sprinkle with a little sugar. Place loaves on buttered baking sheet or jelly-roll pan. Covered loosely, and leave in warm place for about 30 minutes to 1 hour or until risen about 2/3 larger.
Preheat oven to 350°F.
Bake loaves for 35 - 45 minutes, or until loaves turn golden brown.
Brush with butter and dust with confectioner's sugar. Let cool on wire racks

Wrap tightly in foil and keep in a cool place for 2 to 3 weeks to ripen.
When ready to serve, dust with another sprinkling of confectioner's sugar.

2521. Re: [AT_Sprint] Wanted: recipe for German Stoolun

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-21 01:44:57 UTC
From: Hank Greeb
Topic: 2487 Message: 2521

Try one of these

http://www.garvick.com/recipesmm/stollen_recipes.htm

A google search for stollen recipes comes up with about 95,600 hits.

72/73 de n8xx Hg

Steven Weber wrote:
> One of my fondest childhood memories of Christmas is that of eating the
> freash baked German Stoolun (I'm sure I'm not spelling that right, but
> thats how is sounds!) that my mother used to make. I used to love that
> bread, almost as much as the Snickerdoole cookies.
>
> I was wondering if one of our German friends here could post the recipe?
> I'd like to try and make one :-) For those who wonder what this is, its a
> bread with friuts and nuts baked into it and topped with powdered suger.
> Sort of like a friut cake, but much better.
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com
>

2522. Re: Wanted: recipe for German Stoolun

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-21 05:07:26 UTC
From: Jim Fraser
Topic: 2487 Message: 2522

Our family favorite was Kuchen first made by my German Grandmother, then my Mother, and now my Sister. We had them with and without cherries in the topping. I learned this week that my Sister is making a batch for us this Christmas. Can't wait to get my share! I do have the recipe and must try to make one myself someday.

Jim k6jf

2523. KX0R audio plot uploaded to "Misc ATS3B Pics" in JPG format

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-21 12:10:13 UTC
From: Jonathan
Topic: 2523 Message: 2523

For those of you who prefer the JPG for its smaller footprint, there's a new file here:
<http://groups.yahoo.com/group/AT_Sprint/spnew/view/9d23?i=243>
KC7FYS

2524. Re: KX0R audio plot uploaded to "Misc ATS3B Pics" in JPG format

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-21 12:20:45 UTC
From: kc7fys
Topic: 2523 Message: 2524

Ahem, correction, that is "AT Sprint Mixed Pics"

--- In AT_Sprint@yahoogroups.com, Jonathan <kc7fys@...> wrote:
>
> For those of you who prefer the JPG for its smaller footprint,
there's a new file here:
> <http://groups.yahoo.com/group/AT_Sprint/spnew/view/9d23?i=243>
> KC7FYS
>

2525. Re: New file uploaded to AT_Sprint

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-21 12:34:14 UTC
From: kc7fys
Topic: 154 Message: 2525

And even smaller for our dialup friends:
<http://ph.groups.yahoo.com/group/AT_Sprint/photos/view/9d23?b=10&m=f&o=0>

2526. New file uploaded to AT_Sprint

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-21 12:47:36 UTC
From: AT_Sprint@yahoogroups.com
Topic: 154 Message: 2526

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the AT_Sprint
group.

File : /AT Sprint II A.pdf
Uploaded by : nn4cw <gilstacy@...>
Description : ATS II manual

You can access this file at the URL:
http://groups.yahoo.com/group/AT_Sprint/files/AT%20Sprint%20II%20A.pdf

To learn more about file sharing for your group, please visit:
http://help.yahoo.com/l/us/yahoo/groups/original/members/web/index.htmlfiles

Regards,

nn4cw <gilstacy@...>

2527. Re: Building my 2nd B; kester link

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-21 14:54:05 UTC
From: jerry
Topic: 2498 Message: 2527

the link i gave to a solder paste temperature curve was for 'lead free' paste which has a slightly higher peak temperature (235-255C) than lead based paste (210-225C).

http://www.zianet.com/erg/R276.pdf

the paste i have gotten from cash olsen was "kester easy profile 256 no clean" which has the same published reflow temperature profile as "kester 276 no clean"

72
jerry aa1of

2528. Re: [AT_Sprint] German Stollen

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-21 16:55:23 UTC
From: Steven Weber
Topic: 2520 Message: 2528

>I am not German but I found the recipe.

Thanks for digging up the recipe for me Dave. I think I'll forgo the rum
and will definately not wait 2-3 weeks for it to rippen! Eat immidiately
and let cool 15 minutes in stomach is more likely, hi!
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2529. Re: KX0R audio plot uploaded to "Misc ATS3B Pics" in JPG format

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-21 18:10:28 UTC
From: radio_kx0r
Topic: 2523 Message: 2529

--- In AT_Sprint@yahoogroups.com, "kc7fys" <kc7fys@...> wrote:

Jonathan,

Thanks for reformatting my audio plot. That thing started out as a set of numbers recorded manually, then a pencil & paper graph, then a .jpg file from a hand-held camera, then printed as a pdf, and you took it back to .jpg! It's still readable even though it's a much smaller file.

I wish we could get Steve to look at it and tell us why the audio does this little thing. It's an "effect", not a defect.

72/73

Carey
KX0R

> Ahem, correction, that is "AT Sprint Mixed Pics"
>
>
>
> --- In AT_Sprint@yahoogroups.com, Jonathan <kc7fys@> wrote:
> >
> > For those of you who prefer the JPG for its smaller footprint,
> there's a new file here:
> > <http://groups.yahoo.com/group/AT_Sprint/spnew/view/9d23?i=243>
> > KC7FYS
> >
>

2530. Re: Wanted: recipe for German Stoolun

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-21 22:33:20 UTC
From: Klaus
Topic: 2487 Message: 2530

The most popular German Stollen is the Dresdner Christstollen,
traditional baked. You find a lot of information and also the recipe
here:
http://www.dresdnerstollen.com/english/e_index.htm
good luck and let me know, how it tasted.

72/73 Klaus
DL1BJA

2531. identification of L4 in ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-23 21:33:34 UTC
From: ak3f
Topic: 2531 Message: 2531

i am building my 3B and have a question about L4 on the front side of the board.

it is supposed to have a yellow sticker and should be 0.15 uH. but the only part i have left that appears to be an inductor is a same size part with a green cellophane carrier cover, and it seems to measure about 0.23 uH.

the only other inductors had orange and pink tabs. i don't think i confused them. the orange and pink quantities matched, too.

is this different L4 a problem?

thanks for the help,
mike ak3f

2532. Re: [AT_Sprint] Re: Wanted: recipe for German Stollen

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-23 21:43:12 UTC
From: Steven Weber
Topic: 2487 Message: 2532

>traditional baked. You find a lot of information and also the recipe
>here:
> http://www.dresdnerstollen.com/english/e_index.htm

Klaus,

I couldn't find a recipe on the above site, but they would have been happy to sell me one already baked. I did the google search and printed out the top three recipes, bought what they called for and went to visit my friend Vivian up at the lodge where I help out in the summer. She looked over the three recipes and picked the one that looked the easiest to make with what we had.

We mixed up the ingredents yesterday afternoon and since it had to sit overnight to rise, she baked it this morning. By the time I got back up the hill to the lodge, it was cool enough to sample and it tasted pretty good. She actually baked it as two loafs, so I'll have one to take to Christmas dinner with some friends.

Next year we'll plan ahead better and make some with enough time to let them sit and "rippen" for a couple of weeks.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2533. Re: [AT_Sprint] identification of L4 in ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-24 03:53:03 UTC
From: Steven Weber
Topic: 2531 Message: 2533

>it is supposed to have a yellow sticker and should be 0.15 uH. but
>the only part i have left that appears to be an inductor is a same
>size part with a green cellophane carrier cover, and it seems to
>measure about 0.23 uH.

Process of elimination, yes that is the .15 uhy part. I changed the color on the layout diagram for better contrast, but forgot to change it in all the other places it was referenced. The mistake was eventually corrected.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2534. Re: [AT_Sprint] identification of L4 in ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-24 12:40:07 UTC
From: mbhayden
Topic: 2531 Message: 2534
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2535. Re: Trouble with new ATS-3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-24 21:33:21 UTC
From: David Packard
Topic: 2454 Message: 2535

Thanks for the suggestions, Steve. Indeed, the radio was in the tune mode. I carefully looked, with magnification, in the areas that you suggested and I did not see anything suspicious. So, I reheated many solder joints and the receiver is now functioning, except that it is very insensitive. I tried retuning the 40 and 20m filter boards. There was some improvement. When I turn the trimmer caps, I can hear the signal rise and fall, yet as I continue to turn, the peaks do not seem to rise any further. Does the capacitance of these trimmers continue to rise or fall as you turn in one direction or does it run through the entire range of values and keep repeating? I tried to measure the capacitance in circuit without success.

I checked the number of turns on each of the toroids on the filter boards and they are correct (I scanned them on my flatbed scanner and counted the turns on a cropped print of the scan file. What a great idea!). The keyer, side tone, etc. seem to be fine. The transmitter still puts out no detectable RF signal.

I hope you have a great holiday and a happy, successful 2008. 72/73, Dave K1YHR.

2536. Re: Trouble with new ATS-3a (I think you mean B)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-25 03:24:56 UTC
From: mpupeza
Topic: 2454 Message: 2536

Dave K1YHR
The trimmer capacitors go from minimum to maximum capacitance in 180 degrees, then back to minimum in the other 180 degrees.
That means that there 'should' be 2 peaks every 360 degrees, or 1 complete turn of the trimmer. IF you are getting only 1 peak every turn, then you are either getting the best signal at max, or min capacitance - not good, because you may not actually be getting optimum, only as far as the trimmer goes. You would then have to add or subtract a turn or so from the coil for that trimmer. There are some cryptic marks on the green trimmers, but a nice arrow on the brown ones (in my kit) that are supposed to tell you which is which.
Info is in Carey's files, KX0R I think.
As far as the zero output - you did reconnect L3 after testing?
Also, listen in a receiver and see if there is actually a signal.
Good luck!
73
Mike VE3EQP/W4 .....>

2537. Re: [AT_Sprint] Re: Trouble with new ATS-3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-26 02:47:05 UTC
From: Steven Weber
Topic: 2454 Message: 2537

>suggested and I did not see anything suspicious. So, I reheated many
>solder joints and the receiver is now functioning, except that it is
>very insensitive. I tried retuning the 40 and 20m filter boards. There

Double, tripple check the connections to the QSK switch fets between the filter and the mixer input. The gate of Q1 should be at 0 volts and the gate of Q2 5 volts. Make sure the connections of the LF3 coil are correctly installed and the wires are soldered properly.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2538. Wanted to buy: built or unbuilt ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-27 04:53:59 UTC
From: Padawer
Topic: 2538 Message: 2538

Still looking for a built or unbuilt ATS-3B. Please email me with asking price. Thanks very much! Hopefully de Randy, K7RAN

2539. Pocket Digi 1.0.10 and the ATS3B (ver 3 firmware)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-27 19:01:28 UTC
From: Full Some
Topic: 2539 Message: 2539

The following occur whether I use a simple or rail-to-rail op amp (LMC6462) interface with my laptop or desktop and fiddling with pre and post-ambles:

1. The ATS produces a very low level RF transmission (nothing showing on the power meter) in CW send mode when no text is typed. I get full output when I type characters but after they end I still observe the continuous low level RF transmission until I click the lightning bolt.
2. The CAT/frequency option produces some unusual results:
- if you put in the full number of digits for the frequency (e.g. 70720) the ATS will subsequently indicate a frequency (pressing the menu button) of 7200 (i.e. 7.7200 mhz) with significantly reduced band noise
. - any frequency change (e.g entering just 72) results in the ATS generating signals well off frequency although the ATS indicates a frequency of 0720 [i.e. 7.0720 mhz]. I first noticed this when testing into a dummy load with my BLT in tune mode. At 7.072.0 mhz, there was no SWR light; after entering 72 using the CAT function, transmissions lit the SWR light - pressing the menu button showed a frequency of 0720.

Has anyone noted similar observations? Does the CAT function work for you?

Looking for last minute shopping deals? Find them fast with Yahoo! Search.

2540. Re: [AT_Sprint] Pocket Digi 1.0.10 and the ATS3B (ver 3 firmware)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-28 00:00:50 UTC
From: Vojtěch Bubník
Topic: 2539 Message: 2540

Hi Full Some.

> 1. The ATS produces a very low level RF transmission (nothing showing on the
> power meter) in CW send mode when no text is typed. I get full output when
> I type characters but after they end I still observe the continuous low level
> RF transmission until I click the lightning bolt.

You hear DDS leaking out of the box even if PA is off. The leakage level is harmless, nothing to worry about. On TX, DDS output has the same frequency as RF output at the antenna.

> 2. The CAT/frequency option produces some unusual results:
> - if you put in the full number of digits for the frequency (e.g. 70720)

The frequency shall be entered in kHz: 7072.0, not 70720. The current ATS-3b firmware does not check band boundaries. It simply uses only three digits in front of decimal point and two digits after decimal point to set frequency. So you could enter 072 as well. It is already some weeks I wrote the firmware, I hope I gave you correct info.

> the ATS will subsequently indicate a frequency (pressing the menu button) of 7200
>
> (i.e. 7.7200 mhz) with significantly reduced band noise

The firmware will use the old MHz value - 7 and add hundreds of kHz - 720 to it, ending up at 7720kHz. This is certainly out of the narrow input filter, therefore reduced band noise.

73, Vojtech OK1IAK

2541. Re: [AT_Sprint] Pocket Digi 1.0.10 and the ATS3B (ver 3 firmware)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-28 04:33:05 UTC
From: Full Some
Topic: 2539 Message: 2541

Vojtich

Thank you for the information.

The DDS certainly puts out a very strong signal especially when coupled to the antenna.

The ATS 3b documentation indicated that a decimal point should not be used and I followed this. I just tried 7072.0 using the decimal point and it works and no strange harmonics! If I enter 072.0 (the zero doesn't show) the frequency read out is ok but the out of band harmonics return. Typing the full frequency change on the key pad in the program seems to be what is needed.

Thanks again..

Vojt?ch Bubn?k <bubnikv@...> wrote: Hi Full Some.

> 1. The ATS produces a very low level RF transmission (nothing showing on the
> power meter) in CW send mode when no text is typed. I get full output when
> I type characters but after they end I still observe the continuous low level
> RF transmission until I click the lightning bolt.

You hear DDS leaking out of the box even if PA is off. The leakage level is harmless, nothing to worry about. On TX, DDS output has the same frequency as RF output at the antenna.

> 2. The CAT/frequency option produces some unusual results:
> - if you put in the full number of digits for the frequency (e.g. 70720)

The frequency shall be entered in kHz: 7072.0, not 70720. The current ATS-3b firmware does not check band boundaries. It simply uses only three digits in front of decimal point and two digits after decimal point to set frequency. So you could enter 072 as well. It is already some weeks I wrote the firmware, I hope I gave you correct info.

> the ATS will subsequently indicate a frequency (pressing the menu button) of 7200
>
> (i.e. 7.7200 mhz) with significantly reduced band noise

The firmware will use the old MHz value - 7 and add hundreds of kHz - 720 to it, ending up at 7720kHz. This is certainly out of the narrow input filter, therefore reduced band noise.

73, Vojtech OK1IAK

Never miss a thing. Make Yahoo your homepage.

2542. one more B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-28 21:54:42 UTC
From: jaakko330
Topic: 2542 Message: 2542

I put photos of my ATS3B to Flickr if anybody is interested

http://www.flickr.com/photos/oh7bf

Just finished the filter boards yesterday and made first QSO today.

First 0603 resistors were hand soldered, but then I bought Aoyue solder paste from http://www.eurogerd.com/ and a SMD rework station from an other address. I used too much paste for the first resistors, but learned quickly to use only thin layer on the pads. The filter board 0805 resistors are good for training. I started with resistors on top side and then bottom side. Then capacitors the same way. Next all the semiconductors except the DDS chip. Finally the DDS chip went ok, though I had to remove one solder bridge. I used a small racklet plate for preheating the board. Only one solder bridge under the display. The filter boards took some time with winding of the coils. Drilling holes to tin is problematic, should probably punch the holes with a suitable tool.

73 72, Jaakko OH7BF/F5VGL

2543. building the B (and a small erratta)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-28 23:25:19 UTC
From: ak3f
Topic: 2543 Message: 2543

finally some days off to build, so i worked on the 3B. got the whole thing done plus all the filter boards, except for two remaining toroids to wrap.

i used the cash's solder paste and an embossing tool for the smd work. i started with the dense side of the main board, and over a period of two days placed all smd parts held in place (barely) by the tiny drops of solder paste. i also placed all the surface mount semiconductors and ICs, including the DDS chip. rather than a lay a bead of paste down perpendicular to the pad as i have seen in the online demos, i put separate droplets of paste on each individual pad and then set the IC down into it. so from the start i had no paste bridging the pins of the IC. done this way i figured i would not have to rely on capillary action to clear the pins.

as somebody mentioned the stress level of doing this is high. one wrong move and you can be ruined. all the smd caps look the same to me. this was made all the more scary by all my housecats who are prone to jumping up on the work table to say hello.

i then heated the board on my candle warmer and flowed the solder paste with the embossing gun. you need to be careful ... the adhesion of the parts via such a tiny bit of solder paste is tenuous at best. and with my embosser (craft store type) you can blow them off the board.

by the way, it is easy to use too much solder paste. i learned this on a norcal dummy load. only a tiny amount of solder paste is required. my syringe appears to just barely been used. i have plenty for several more big projects. my paste is about 2 months old, and i have kept it in the fridge. i had no problems at all with clumping or dryness.

the flowing went perfect. after solder paste had all flowed, i unplugged the candle warmer and let the board cool down slowly for a couple minutes, then took it off the plate. i looked at every solder joint, and all but two joints on a couple resistors had failed to flow. so i spot worked them with the embosser without issues. no solder bridges, and no tombstones. it was really amazing.

i flipped the board over to the front, less dense side, and did the same thing. i also stuck the led display down. i propped the board up on the warmer plate with some pennies on the corners, and flowed the front of the board. the front came out perfect, and the parts did not fall off the back either.

i followed the checkout procedure in the manual (second run of 100) and found no issues. however, the manual has a couple typos:

under Check out and Calibration it says to check the voltage of the PA gates, Q6 to Q8. this should be Q7 to Q9.

and it also says to check the drain of Q4 and key some dahs... it should be Q6, the PA Keying transistor, not Q4. neither does Q4 have a big tab like Q6 so this is easy to catch.

my reference oscillator was about 84 hz too high, easily corrected during calibration. and when doing the local oscillator trim and BFO setting, i saw two humps in the passband. i think this has been reported before and it was very slight in any case.

so far everything has been perfect and i had to stop to rig a convenient antenna accessible from by workbench. all i have left is aligning the filter boards and i'm on the air with it!

i have two toroids left to do because two toroids apparently got crushed by the postal service and came as crumbs. the train wreck bent up one of the green trimmers too, but i salvaged it. this is sad since steve carefully marks the shipping bag DO NOT MACHINE PROCESS FRAGILE. and everything in the bag is padded really well.

i look at this project and remain absolutely amazed at steve's design, and the fact that i got it built without any issues whatsoever (heh, so far). this was my first big smd project. it was a lot easier than i thought it would be.

mike ak3f

2544. ATS-3B strange DDS output

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-29 16:04:24 UTC
From: sergej kindsvater
Topic: 2544 Message: 2544
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2545. Re: [AT_Sprint] ATS-3B strange DDS output

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-29 18:02:25 UTC
From: Steven Weber
Topic: 2544 Message: 2545

> Hi, while attempting to calibrate the reference oscillator I
>found that I am measuring 6 MHZ instead of 10 MHz at TP1 and can't
>adjust it. LO trim calibration does produce audio okay.

If the LO trim produces the audio beat note, then the DDS is producing the correct frequencies. It could be that your frequency counter isn't responding to the TP1 signal properly. Try measuring at the R16/C28 junction instead.

>via paddle. There is also no receive and no transmit (I sofar completed
>only 80m filter board) My kit came without the 2N7002 MOSFETS so I

Every board which I have fixed for people so far have only required finding and fixing the soldering problems.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2546. Several items for sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-29 23:47:03 UTC
From: jess gypin
Topic: 2546 Message: 2546
Attachments: 2 described; binary payloads are missing from this source WARC

```
[ Attachment content not displayed ]
```

2547. Re: [AT_Sprint] Several items for sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-30 00:27:29 UTC
From: Ron Kenwood
Topic: 2546 Message: 2547

I will take the QBSA if its still available.

Ron W3ZV

jess gypin wrote:
> Unfortunately.
> Things happen that force the sale of items you should not have to sell.
>
> 1- ATS-3 Complete kit, Only Opened for inventory and looking at $145.00 is
> what I paid for it.
> 1- ATS-3B Complete kit As above condition $190.00
> 1 QRP Base Station Accessory $50.00 (I think that is what I paid)
>
> Don't want to but that's the way it is. I can take credit cards. Add 3% to
> each price if that is what you intend to do. Otherwise,,certified funds are
> appreciated. Wish I would have has the chance to build one and operate it,
> but life has other plans.
>
> Jess Gypin AE0CW
>

2548. RE: [AT_Sprint] Several items for sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-30 00:51:54 UTC
From: Dale Putnam
Topic: 2546 Message: 2548

Hi Jess,
I am sure interested in the B... are you looking for cash?
Or trade?

--... ...--Dale - WC7S in Wy

To: AT_Sprint@yahoogroups.comFrom: ontarget1911@...: Sat, 29 Dec 2007 16:47:03 -0700Subject: [AT_Sprint] Several items for sale

Unfortunately.
Things happen that force the sale of items you should not have to sell.

1- ATS-3 Complete kit, Only Opened for inventory and looking at $145.00 is what I paid for it.
1- ATS-3B Complete kit As above condition $190.00
1 QRP Base Station Accessory $50.00 (I think that is what I paid)

Don't want to but that's the way it is. I can take credit cards. Add 3% to each price if that is what you intend to do. Otherwise,,certified funds are appreciated. Wish I would have has the chance to build one and operate it, but life has other plans.

Jess Gypin AE0CW

Don't get caught with egg on your face. Play Chicktionary!
http://club.live.com/chicktionary.aspx?icid=chick_wlhmtextlink1_dec

2549. Re: [AT_Sprint] Several items for sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-30 12:04:00 UTC
From: klaus.moehr@t-online.de
Topic: 2546 Message: 2549
Attachments: 1 described; binary payloads are missing from this source WARC

Hi Jess,
I am interested in the ATS-3B-kit. Please let me know, what I have to pay inclusive shipment to Germany and if I can pay via paypal.
73 + hny de Klaus DM4TJ

"jess gypin" <ontarget1911@...> schrieb:
Unfortunately.Things happen that force the sale of items you should not have to sell. 1- ATS-3 Complete kit, Only Opened for inventory and looking at $145.00 is what I paid for it.1- ATS-3B Complete kit As above condition $190.001 QRP Base Station Accessory $50.00 (I think that is what I paid) Don't want to but that's the way it is. I can take credit cards. Add 3% to each price if that is what you intend to do. Otherwise,,certified funds are appreciated. Wish I would have has the chance to build one and operate it, but life has other plans. Jess Gypin AE0CW

2550. VE3WMB ATS3A in American Morse Equipment AA1 enclosure

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-30 15:49:56 UTC
From: ve3wmb
Topic: 2550 Message: 2550

I just created a new folder in the Photos section of this group titled "VE3WMB ATS3A" and I have placed three shots of my ATS3A, which is in an American Morse Equipment AA1 enclosure, rather than the "traditional" altoids tin.

I think it was Jess AE0CW that was interested seeing these.

I keep the rig in a Pelican 1010 microcase (also shown in these pictures) during transport to keep safe and dry during transport and it just fits.

The companion case for the band modules is an altoids tin lined with conductive foam (the stuff used for storing ICs) secured to the tin with a few dabs of hot glue.

Michael VE3WMB

P.S. Its still a bit early, but Happy New Year to all of you!

2551. Items for sale and sold

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-30 15:59:22 UTC
From: jess gypin
Topic: 2551 Message: 2551
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2552. Re: [AT_Sprint] Items for sale and sold

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-30 16:29:38 UTC
From: Ron Kenwood
Topic: 2551 Message: 2552

Jess:

I sent e-mail yesterday via the reflector advising I would take the
QBSA. I still will unless its gone:

Ron W3ZV

jess gypin wrote:
> The ATS-3B and ATS-3 that I had are spoken for.
> I still have the QRP Base Station Accessory $45.00
>
> Jess AEoCW <><
>

2553. Re: [AT_Sprint] VE3WMB ATS3A in American Morse Equipment AA1 enclosure

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-30 16:47:04 UTC
From: Kurt Savegnago
Topic: 2550 Message: 2553

What's the plastic outer box? Looks rugged.

Kurt KC9LDH
--- ve3wmb <mbabineau@...> wrote:

>
> I just created a new folder in the Photos section of
> this group titled
> "VE3WMB ATS3A" and I have placed three shots of my
> ATS3A, which is in an
> American Morse Equipment AA1 enclosure, rather than
> the "traditional"
> altoids tin.
>
> I think it was Jess AE0CW that was interested seeing
> these.
>
> I keep the rig in a Pelican 1010 microcase (also
> shown in these
> pictures) during transport to keep safe and dry
> during transport and
> it just fits.
>
> The companion case for the band modules is an
> altoids tin lined with
> conductive foam (the stuff used for storing ICs)
> secured to the tin
> with a few dabs of hot glue.
>
> Michael VE3WMB
>
> P.S. Its still a bit early, but Happy New Year to
> all of you!
>
>
>
>
> Yahoo! Groups Links
>
>
>
>
>

Slackware user since 1994

2554. Re: [AT_Sprint] building the B (and a small erratta)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-30 19:03:04 UTC
From: mbhayden
Topic: 2543 Message: 2554
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2555. 3B Label

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-30 19:55:39 UTC
From: WA0ITP
Topic: 2555 Message: 2555

Hi Mike,

Want one of these?
http://www.wa0dx.org/wa0itp/ats3b.html

Back to the bench,
Winter's too valuable to waste.
72 73
Terry, WAØITP
http://www.wa0dx.org/wa0itp
http://www.wa0dx.org
http://www.4sqrp.com/

----- Original Message -----
From: mbhayden
To: AT_Sprint@yahoogroups.com
Sent: Sunday, December 30, 2007 1:03 PM
Subject: Re: [AT_Sprint] building the B (and a small erratta)

i'm done except for labeling. i put a photo in the photo area in the ak3f folder.

my gold brick 3B, qbsa and the slt tuner. everything works just great and just in time for SKN.

i'm using a wire in the trees about 134 ft long with a 66 ft counterpoise. so far works fb on 80 through 20.

i used a round hole for the window over the led on the 3b. easier than making a square hole.

for drilling the thin tin, i first made a block of 3/4"hardwood that fit snugly in the altoids tin. with rock solid inside support on all sides, drilling was controlled and pretty easy.

mike ak3f

No virus found in this incoming message.
Checked by AVG Free Edition.
Version: 7.5.516 / Virus Database: 269.17.12/1202 - Release Date: 12/29/2007 1:27 PM

2556. Re: [AT_Sprint] VE3WMB ATS3A in American Morse Equipment AA1 enclosure

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-30 20:55:43 UTC
From: Chuck Milam
Topic: 2550 Message: 2556
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2557. Re: [AT_Sprint] 3B Label

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-30 22:31:27 UTC
From: mbhayden
Topic: 2555 Message: 2557
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2558. Re: [AT_Sprint] ATS-3B strange DDS output

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2007-12-30 23:03:09 UTC
From: sergej kindsvater
Topic: 2544 Message: 2558
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2559. Need more basic instructions for adujsting LO freq using Spectrum Analyzer

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-01 09:22:25 UTC
From: kc7fys
Topic: 2559 Message: 2559

I'm going back to P23 in Steve's manual, and using an audio spectrum analyzer program on my PC--could someone give me a tiny bit more detailed instructions on making this adjustment? The excellent instructions are written for a ham with a bit more experience and knowledge than I have. I should have the audio output of my 3B attached to the audio in of my PC. I have a signal source--my other rig.
Thanks.
Jonathan

2560. Re: [AT_Sprint] Need more basic instructions for adujsting LO freq using Spectrum Analyzer

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-01 13:51:41 UTC
From: Kurt Savegnago
Topic: 2559 Message: 2560

I'd be curious too. What cables to use and where to
input/output stuff. Lots of options in Digipan.

Kurt KC9LDH
--- kc7fys <kc7fys@...> wrote:

> I'm going back to P23 in Steve's manual, and using
> an audio spectrum
> analyzer program on my PC--could someone give me a
> tiny bit more
> detailed instructions on making this adjustment? The
> excellent
> instructions are written for a ham with a bit more
> experience and
> knowledge than I have. I should have the audio
> output of my 3B
> attached to the audio in of my PC. I have a signal
> source--my other rig.
> Thanks.
> Jonathan
>
>
>
>
> Yahoo! Groups Links
>
>
>
>
>

Slackware user since 1994

2561. Re: [AT_Sprint] Need more basic instructions for adujsting LO freq using Spectrum Analyzer

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-01 14:20:34 UTC
From: Gil Stacy
Topic: 2559 Message: 2561
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2562. W1MT's calib procedure

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-01 14:29:00 UTC
From: kc7fys
Topic: 2562 Message: 2562

Cogent to the forum and not to bandwidth-hogging:

ATS3 Calibration Procedure

Almost everyone has a computer and receiver these days. This calibration procedure requires a receiver capable of receiving WWV at 10MHz and a computer to receive the audio. Using Spectrogram, Spectran, baudline or equivalent you can calibrate the frequency and offset pretty accurately. A noise generator can be helpful or just a noisy band.

Prestep: Peak the IF transformer for peak noise. (Use noise generator if you have one or just a wire connected to the antenna connection. This is for the ATS-3 only)

Step 1: Tweak the trimmer cap on the ATS main board to position the filter shape to where you want it. (Generally centered around 600Hz and a noise generator helps). Do this with the audio from the ATS rig connected to the computer and spectro program.

Step 2: Connect the receiver audio out to the computer audio in and start up your spectro program (free shareware version of Spectrogram 5.17 available at www.n0ss.net). Tune the receiver to 10MHz WWV and set the carrier of WWV to 600Hz (606.8Hz is the actual sidetone on ATS rigs with my firmware) on the spectro display. A general coverage receiver works FB!

Step 3: Put the ATS rig in calibration mode "CF". With a short wire (3"-12") on the appropriate test point (TP1) you should see a signal on the computer screen. Click the tune up/down buttons till the new signal matches the WWV carrier. In CF mode the rig will broadcast a near 10MHz signal from TP1. If your receiver is unshielded or is fed by a non-coax fed antenna, your receiver should pickup the tone broadcast via TP1. With the up/down buttons on the ATS rig, superimpose TP1's signal on top of the previously set tone of WWV. Do not power down the ATS rig, but go to the next step.

Step 4: With power still on, connect the ATS rig audio out to the computer audio in and click the menu button to activate CO mode. Move up/down buttons to center the tone on the previously chosen frequancy. Once tone is centered click menu and you are done. You can easily tell what freq to use by keeping your ATS audio connected to the computer and letting the rig send audio (click menu once so that the freq is announced). The screen will tell you what sidetone the rig is using.

Now your freq is spot on and your offset is such that if you hear a station at 600Hz you will be right on top of them (zerobeat).

FAQ

Is peaking at PIN 1 while in CO mode necessary?

You will notice that the peak for Pin 1 in CO mode is very broad and I would rather my offset match my sidetone to make zero beating easier than be perfectly peaked. Use the BFO trimmer cap to center the bandpass filter on your sidetone of interest using baudline or Spectrogram (Step 1).

2563. 3b ref oscillator/calibration question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-01 16:19:43 UTC
From: ak3f
Topic: 2563 Message: 2563

on the 3b, it appears that the reference oscillator tweeking needs to be done every time you enter the CF mode. is this true?

thanks
mike ak3f

2564. Re: [AT_Sprint] 3b ref oscillator/calibration question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-01 17:47:09 UTC
From: Michael Harnage
Topic: 2563 Message: 2564

You can remove power to "cancel". If you want to
adjust one parameter then you must adjust both. Just
remember the numbers for future reference... I use a
notation like -11/+3 which means tune down 11 clicks
for CF adjustment and tune up 3 clicks for CO
adjustment.

Hope this helps.

-mike

--- ak3f <mbhayden@...> wrote:

> on the 3b, it appears that the reference oscillator
> tweeking needs to
> be done every time you enter the CF mode. is this
> true?
>
> thanks
> mike ak3f
>
>

Be a better friend, newshound, and
know-it-all with Yahoo! Mobile. Try it now.
http://mobile.yahoo.com/;_ylt=Ahu06i62sR8HDtDypao8Wcj9tAcJ

2565. Re: [AT_Sprint] 3b ref oscillator/calibration question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-01 19:38:53 UTC
From: mbhayden
Topic: 2563 Message: 2565
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2566. Re: [AT_Sprint] 3b ref oscillator/calibration question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-01 22:34:28 UTC
From: Steven Weber
Topic: 2563 Message: 2566

>on the 3b, it appears that the reference oscillator tweeking needs to
>be done every time you enter the CF mode. is this true?

Yes. Default values are loaded when CF mode is initiated. This ensures a
known good starting point in case the calibration values get corrupted.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2567. Winding 75 turns of #30 on a T37-2

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-02 10:29:26 UTC
From: kc7fys
Topic: 2567 Message: 2567

A new potential ham here at Chez 7J1AWL brings more indoor time, and much more workbench tinker-time. Whoo hoo.
I've been poring over KX0R's Filter Module pdf and photos. Thanks for the complete information on these mods! However, how the heck did you fit 75 turns of #30 wire on a T37-2?! I've got 50-some crammed on there, and that's it. Your photo, although fairly hi-resolution, doesn't show how you fit that amount of wire on there.
Mine so far:
<http://farm3.static.flickr.com/2329/2157292339_d4555b2eae.jpg>
Ain't no more gonna fit. ((I'll leave this mod until last. Your recommended specs for the 40 meter module worked wonderfully. My KD1JV power meter reads just under 4 watts feeding it 11VDC. The (a lot less accurate?) center LED on my T1 antenna tuner lights alone. Looks good.
Anyway, did you use fewer turns, a slenderer gauge of wire, or?
Jonathan

2568. problems with ats3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-02 13:57:35 UTC
From: dave3wave
Topic: 2568 Message: 2568

hi
I solderd my kit. I made the check according the handbook page 22.
It's all ok until power on. Power on: the message "8" appears. The
display shoes "A". The current is abt 30-40mA. Power off/power on: "F"
appears on the display. It seams the lower bar of the display doesn't
work (reading out the qrg). So the F means E. E is over current
detection. But why after power off and immediate power on? After
"wrong" power on the F appears. The current is in the same range.
After pressing Menu the display is clear. While pressing UP there is a
constant tone.
The voltage at tp1 is ok.
The voltage at PA gates are ok.
Plug in a paddle: do works as a straight key. I changed from
alternative key to normal key. Dot (or dash?) works - but very fast. I
cant change the speed.
After power on (with paddle) and the F appears I push Menu and then
the fas keying comes....
Voltage Q6 (PA keying transistor): ok

The voltages according page 26 are ok - except U6 and U7 (sorry I cant
measure U7. The pins are too narrow!!)

Voltage of u6 (no sign on display):
Pin1: 0V ok
Pin2: 3.5V ok
Pin3: 0V ok
Pin4: 0V ok
Pin5: 2.7V ok
Pin6: 2V suppose ok
Pin7: 3.5V ok
Pin8: 0.1V not ok
Pin9: 3.5V ok
Pin10: 3.5V ok
Pin11: 3.5V ok
Pin12: 3.5V ok
Pin13: 3.5V ok
Pin14: 3.5V ok
Pin15: 3.5V ok
Pin16: 3.5V ok
Pin17: 3.5V ok
Pin18: 3.5V ok
Pin19: 1.1V ok
Pin20: 3.5V ok
Pin21: 3.5V ok
Pin22: 3.5V ok

Pin23: 3.5V ok
Pin24: 0V ok
Pin25: 0V ok
Pin26: 3.5V ok
Pin27: 3.5V ok
Pin28: 3.5V ok

Are the numbers of U8 in the schematics identical to the pin numbers of the IC? Pin 4 must have a short contact to the gates of q7/8/9. I measure a resistance of abt 9.5MOhm. That's a little bit strange.....

Have you any good ideas??

73 David

2569. Re: Winding 75 turns of #30 on a T37-2

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-02 15:11:27 UTC
From: radio_kx0r
Topic: 2567 Message: 2569

--- In AT_Sprint@yahoogroups.com, "kc7fys" <kc7fys@...> wrote:

Jonathan,

Your question is a good one - I should have put that in my notes in the pdf. Maybe I'll edit it. You're the first to ask, so maybe no one else has looked at that toroid so far.

That LF4 toroid really is 75 turns on a T37-2. The turns are overlapped - just keep winding over the first layer. This is usually not recommended for best Q, but it works OK. It's likely that the toroid wound with overlap will have a much higher Q than the molded part we're replacing. LF4 is in the receiver front end, and it's not critical - in fact, the molded inductor will work OK, even with a slight mistuning, because 80M is a noisy band and we won't notice a few db of signal loss in the receiver. If you have some smaller wire and enough patience, you could use that - 75 turns will still be close.

Your target is about 22 uH, if you have a way to measure that inductor.

Another easy option here is to use the original 18 uH molded inductor and install a capacitor in the holes for C7F. C7F is not used in Steve's list of parts, but the board is laid out for it. I'm guessing that we would need somewhere between 10 and 22 pf for C7F to pull that resonance down, so CT1 will tune it right on, if we use the original 18 uH part.

If you get this inductor right, you should see or hear two peaks as you rotate CT1 through a full 360 degree turn. If you're "on the edge", or off-center, you'll only see one peak.

I tuned my filters at about 3.560 Mhz. Now that the 80M phone band goes down to 3.600, we have little reason to use this rig much above 3.600.

Let me know how you finish this and how it works - surprised no one else has asked...

Glad you found improvement on 40M with my suggested changes.

72/73

KX0R
Carey Fuller

> A new potential ham here at Chez 7J1AWL brings more indoor time, and
> much more workbench tinker-time. Whoo hoo.
> I've been poring over KX0R's Filter Module pdf and photos. Thanks for

> the complete information on these mods! However, how the heck did you
> fit 75 turns of #30 wire on a T37-2?! I've got 50-some crammed on
> there, and that's it. Your photo, although fairly hi-resolution,
> doesn't show how you fit that amount of wire on there.
> Mine so far:
> <http://farm3.static.flickr.com/2329/2157292339_d4555b2eae.jpg>
> Ain't no more gonna fit. ((I'll leave this mod until last. Your
> recommended specs for the 40 meter module worked wonderfully. My KD1JV
> power meter reads just under 4 watts feeding it 11VDC. The (a lot less
> accurate?) center LED on my T1 antenna tuner lights alone. Looks good.
> Anyway, did you use fewer turns, a slenderer gauge of wire, or?
> Jonathan
>

2570. Re: Winding 75 turns of #30 on a T37-2

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-02 15:43:21 UTC
From: radio_kx0r
Topic: 2567 Message: 2570

Oops - I meant CT2, not CT1, in the text.

Carey
KX0R

-- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@...> wrote:
>
>
> Jonathan,
>
> Your question is a good one - I should have put that in my notes in
the
> pdf. Maybe I'll edit it. You're the first to ask, so maybe no one
> else has looked at that toroid so far.
>
> That LF4 toroid really is 75 turns on a T37-2. The turns are
> overlapped - just keep winding over the first layer. This is
usually
> not recommended for best Q, but it works OK. It's likely that the
> toroid wound with overlap will have a much higher Q than the molded
> part we're replacing. LF4 is in the receiver front end, and it's
not
> critical - in fact, the molded inductor will work OK, even with a
> slight mistuning, because 80M is a noisy band and we won't notice a
few
> db of signal loss in the receiver. If you have some smaller wire
and
> enough patience, you could use that - 75 turns will still be
close.
>
> Your target is about 22 uH, if you have a way to measure that
inductor.
>
> Another easy option here is to use the original 18 uH molded
inductor
> and install a capacitor in the holes for C7F. C7F is not used in
> Steve's list of parts, but the board is laid out for it. I'm
guessing
> that we would need somewhere between 10 and 22 pf for C7F to pull
that
> resonance down, so CT1 will tune it right on, if we use the
original 18
> uH part.
>
> If you get this inductor right, you should see or hear two peaks as

you
> rotate CT1 through a full 360 degree turn. If you're "on the
edge", or
> off-center, you'll only see one peak.
>
> I tuned my filters at about 3.560 Mhz. Now that the 80M phone band
> goes down to 3.600, we have little reason to use this rig much
above
> 3.600.
>
> Let me know how you finish this and how it works - surprised no one
> else has asked...
>
> Glad you found improvement on 40M with my suggested changes.
>
> 72/73
>
> KX0R
> Carey Fuller
>
> > A new potential ham here at Chez 7J1AWL brings more indoor time,
and
> > much more workbench tinker-time. Whoo hoo.
> > I've been poring over KX0R's Filter Module pdf and photos. Thanks
for
> > the complete information on these mods! However, how the heck did
you
> > fit 75 turns of #30 wire on a T37-2?! I've got 50-some crammed on
> > there, and that's it. Your photo, although fairly hi-resolution,
> > doesn't show how you fit that amount of wire on there.
> > Mine so far:
> > <http://farm3.static.flickr.com/2329/2157292339_d4555b2eae.jpg>
> > Ain't no more gonna fit. ((I'll leave this mod until last. Your
> > recommended specs for the 40 meter module worked wonderfully. My
KD1JV
> > power meter reads just under 4 watts feeding it 11VDC. The (a lot
less
> > accurate?) center LED on my T1 antenna tuner lights alone. Looks
good.
> > Anyway, did you use fewer turns, a slenderer gauge of wire, or?
> > Jonathan
> >
>

2571. Re: [AT_Sprint] Winding 75 turns of #30 on a T37-2

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-02 15:45:28 UTC
From: mstangelo@comcast.net
Topic: 2567 Message: 2571

Jonathan,

I also used KX0R's filter. I ran out of space with 50 turns so I just overlapped the original windings with a second. layer and it worked fine.

I was concerned about stray capacitance so I checked the inductance and self resonant frequency with my N2PK VNA. The inductance measures 24uh at 3.5 Mhz so I removed 5 turns to get 22uh at 3.5 Mhz.

The adjustments went up went according to the directions and I was able to get 5watts out on all bands at 12 volts.

I spent the holiday time off building and operating this rig. I manually soldered the compoments and all went well. I had some difficulty visually verfiying the solder connection with the 0603 caps because the pads were not long enough; the solder connection is under the component.

I thank Steve for the tremendous effort he put into designing this rig and look forward to his future creations.

73,

Mike N2MS

--------------- Original message --------------
From: "kc7fys" <kc7fys@...>

> A new potential ham here at Chez 7J1AWL brings more indoor time, and
> much more workbench tinker-time. Whoo hoo.
> I've been poring over KX0R's Filter Module pdf and photos. Thanks for
> the complete information on these mods! However, how the heck did you
> fit 75 turns of #30 wire on a T37-2?! I've got 50-some crammed on
> there, and that's it. Your photo, although fairly hi-resolution,
> doesn't show how you fit that amount of wire on there.
> Mine so far:
>
> Ain't no more gonna fit. ((I'll leave this mod until last. Your
> recommended specs for the 40 meter module worked wonderfully. My KD1JV
> power meter reads just under 4 watts feeding it 11VDC. The (a lot less
> accurate?) center LED on my T1 antenna tuner lights alone. Looks good.
> Anyway, did you use fewer turns, a slenderer gauge of wire, or?
> Jonathan
>

2572. Re: [AT_Sprint] problems with ats3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-02 16:26:35 UTC
From: Michael Harnage
Topic: 2568 Message: 2572

For Pin 8 check that the cap (C40) is not shorted.
(With no key connected.)

Display: For pins 11-18, check them when the display should read "8". Only one should read 3.5V (decimal point), the rest should be nr 0V. Double check all solder joints on the MPU (Pins 11-18) and the resistors (R27-R34) and even the solder joints on the LED display.

-mike/w1mt

--- dave3wave <dabrog@...> wrote:

>
> Voltage of u6 (no sign on display):
> Pin1: 0V ok
> Pin2: 3.5V ok
> Pin3: 0V ok
> Pin4: 0V ok
> Pin5: 2.7V ok
> Pin6: 2V suppose ok
> Pin7: 3.5V ok
> Pin8: 0.1V not ok
> Pin9: 3.5V ok
> Pin10: 3.5V ok
> Pin11: 3.5V ok
> Pin12: 3.5V ok
> Pin13: 3.5V ok
> Pin14: 3.5V ok
> Pin15: 3.5V ok
> Pin16: 3.5V ok
> Pin17: 3.5V ok
> Pin18: 3.5V ok
> Pin19: 1.1V ok
> Pin20: 3.5V ok
> Pin21: 3.5V ok
> Pin22: 3.5V ok
> Pin23: 3.5V ok
> Pin24: 0V ok
> Pin25: 0V ok
> Pin26: 3.5V ok
> Pin27: 3.5V ok
> Pin28: 3.5V ok
>

Never miss a thing. Make Yahoo your home page.
http://www.yahoo.com/r/hs

2573. Post-Test

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-02 17:35:07 UTC
From: dj3kk.fred
Topic: 2573 Message: 2573

Hallo and vy 72
Fred, DJ3KK

2574. Re: problems with ats3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-02 17:51:29 UTC
From: dave3wave
Topic: 2568 Message: 2574

--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:
>
> For Pin 8 check that the cap (C40) is not shorted.
> (With no key connected.)
>
> Display: For pins 11-18, check them when the display
> should read "8". Only one should read 3.5V (decimal
> point), the rest should be nr 0V. Double check all
> solder joints on the MPU (Pins 11-18) and the
> resistors (R27-R34) and even the solder joints on the
> LED display.
>
> -mike/w1mt
>
>
Hi Mike
tnx for the short reply. C40 is not shorted (I measured it with a multi meter. The resisance dropped down to abt. 110kOhm. Shorted means for me a resistance <1 Ohm).I checked (resoldered) the display, mpu and r27-34: no success....
Which pin of the display is for the lowest horizontal bar?

David

2575. DFE on 80m -- Sorry for the post

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-02 18:14:22 UTC
From: sarush_2000
Topic: 2575 Message: 2575

I found the answer, sorry.

steve

2576. Re: [AT_Sprint] Re: problems with ats3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-02 18:33:57 UTC
From: Michael Harnage
Topic: 2568 Message: 2576

I believe it is pin 16 (port 3.5). Try following the
voltages from there to the led. Without led display
and with led = "8".

-mike

--- dave3wave <dabrog@...> wrote:

> Which pin of the display is for the lowest
> horizontal bar?
>
> David
>

_____
Be a better friend, newshound, and
know-it-all with Yahoo! Mobile. Try it now.
http://mobile.yahoo.com/;_ylt=Ahu06i62sR8HDtDypao8Wcj9tAcJ

2577. Re: problems with ats3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-02 19:05:01 UTC
From: dave3wave
Topic: 2568 Message: 2577

```
--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:
>
> I believe it is pin 16 (port 3.5). Try following the
> voltages from there to the led. Without led display
> and with led = "8".
>
> -mike
>
>
>
> --- dave3wave <dabrog@...> wrote:
>
> > Which pin of the display is for the lowest
> > horizontal bar?
> >
> > David
> >
>
>

Hi Mike
Bingo - the problem with the display is solved. It was pin2 of the
display. There was a bad solderpoint.
Now, power off and again on, "E" appears on the display. What can be
the reason for this point?

David
>

------------------------------------------------------------------------------
> Be a better friend, newshound, and
> know-it-all with Yahoo! Mobile. Try it now.
http://mobile.yahoo.com/;_ylt=Ahu06i62sR8HDtDypao8Wcj9tAcJ
>
```

2578. Re: [AT_Sprint] Re: problems with ats3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-02 19:13:54 UTC
From: John A. Evans - N0HJ
Topic: 2568 Message: 2578

Dave,
Here is Steve's fix for this, posted on 9/19/07 -

72 - john - n0hj

A 22K resistor arcoss the 3.5 V supply is enough of a load to eliminate the "E" coming on with short power down/power up cycles. A good place to tack a 22K resistor is at the clock osc, from pins 4 to 2 or 1 to 2.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com <http://kd1jv.qrpradio.com>

dave3wave wrote:
>
>
> Now, power off and again on, "E" appears on the display. What can be
> the reason for this point?
>
> David
>

2579. Re: problems with ats3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-02 19:48:11 UTC
From: dave3wave
Topic: 2568 Message: 2579

--- In AT_Sprint@yahoogroups.com, "John A. Evans - N0HJ" <jaevans@...>
wrote:
>
>
> Dave,
> Here is Steve's fix for this, posted on 9/19/07 -
>
> 72 - john - n0hj
> ----------
>
> A 22K resistor arcoss the 3.5 V supply is enough of a load to
eliminate the
> "E" coming on with short power down/power up cycles. A good place to
tack a
> 22K resistor is at the clock osc, from pins 4 to 2 or 1 to 2.
>
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com <http://kd1jv.qrpradio.com>
>
>
Hi John
tnx for the information. Ok it's not a problem of only my kit (ant
it's not really a problem).
So I have still the point with the paddle.

David

2580. Re: [AT_Sprint] Re: problems with ats3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-02 20:51:16 UTC
From: Michael Harnage
Topic: 2568 Message: 2580

Dave,

For the power reset issue you can also just hold a
button or two down for a couple of seconds to drain
the buildup in the caps. Does the same thing as adding
the 22K resistor.

For your paddle, I still suspect the cap. But first
try reflowing the dash pin on the MPU. If that fails
to fix remove the cap to groud off that pin and see
what voltage you have at the dash pin of the MPU.

-mike

--- dave3wave <dabrog@...> wrote:

> So I have still the point with the paddle.
>
> David
>

_____
Never miss a thing. Make Yahoo your home page.
http://www.yahoo.com/r/hs

2581. Re: [AT_Sprint] Re: problems with ats3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-02 21:00:28 UTC
From: Michael Harnage
Topic: 2568 Message: 2581

One more thought. If you have a jack connected for the
key try removing it from the equation. If there is a
short in the jack you will see thing like your getting
on the dash pin, too.

-mike

--- dave3wave <dabrog@...> wrote:
> So I have still the point with the paddle.
>
> David
>

_____
Never miss a thing. Make Yahoo your home page.
http://www.yahoo.com/r/hs

2582. Re: [AT_Sprint] problems with ats3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-02 21:08:42 UTC
From: Steven Weber
Topic: 2568 Message: 2582

First, the E problem.

There is not enough current draw to discharge the cap across the 3.5V regulator quickly, so when doing a quick power on/off/on cycle, the data used to tell if there is a "cold" or "warm" boot doesn't get corrupted. This is only a problem if there is no or a 80M band module installed. The fix is to either hold two switches closed for a couple of seconds after power up or to tack a 22K ohm resistor across the 3.5 V regualor (putting it across the C58 pins on the bottom of the board is a good place)

As for the other problems, they are likely caused by bad/missing solder connections. The steady tone is generally a bad missing connection somewhere in the audio amplifier section, the missing segment could be the cpu pin which drives it, the series resistor or connection to the display. Only working in straight key mode indicates a short on the dash input or a bad connection to the 47K pull up resistor to that cpu pin.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2583. Re: problems with ats3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-02 22:19:51 UTC
From: dave3wave
Topic: 2568 Message: 2583

--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:
>
> Dave,
>
> For the power reset issue you can also just hold a
> button or two down for a couple of seconds to drain
> the buildup in the caps. Does the same thing as adding
> the 22K resistor.
>
> For your paddle, I still suspect the cap. But first
> try reflowing the dash pin on the MPU. If that fails
> to fix remove the cap to groud off that pin and see
> what voltage you have at the dash pin of the MPU.
>
> -mike
>
> --- dave3wave <dabrog@...> wrote:
>
> > So I have still the point with the paddle.
> >
> > David
> >
>
>
>

Hi Mike
I took the cap away -> no success, the same behavior..... There was
abt. 0.3V at pin8 of u6.

David

> Never miss a thing. Make Yahoo your home page.
> http://www.yahoo.com/r/hs
>

2584. Re: problems with ats3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-02 22:33:58 UTC
From: dave3wave
Topic: 2568 Message: 2584

--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:
>
> One more thought. If you have a jack connected for the
> key try removing it from the equation. If there is a
> short in the jack you will see thing like your getting
> on the dash pin, too.
>
> -mike
>
> --- dave3wave <dabrog@...> wrote:
> > So I have still the point with the paddle.
> >
> > David
> >
>
Hi Mike
I took the jack away -> no success.
I measured the resitance between pin 8 and ground. It was 1.9 MOhm.
There is no short between pin 8 and ground (between pin 9 and ground
is abt. 1.5 MOhm).

David

> Never miss a thing. Make Yahoo your home page.
> http://www.yahoo.com/r/hs
>

2585. Re: problems with ats3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-02 22:48:17 UTC
From: dave3wave
Topic: 2568 Message: 2585

--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:
>
> One more thought. If you have a jack connected for the
> key try removing it from the equation. If there is a
> short in the jack you will see thing like your getting
> on the dash pin, too.
>
> -mike
>
> --- dave3wave <dabrog@...> wrote:
> > So I have still the point with the paddle.
> >
> > David
> >
>
>
Hi Mike
When I give a series of dots it gets only one dot.. Maybe I gave some
rubbish in the menu-system. Is it possible to do a master reset?

David

> Never miss a thing. Make Yahoo your home page.
> http://www.yahoo.com/r/hs
>

2586. Re: [AT_Sprint] Winding 75 turns of #30 on a T37-2

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-03 00:28:40 UTC
From: mstangelo@comcast.net
Topic: 2567 Message: 2586

All,

Oops. I refered to the 0603 size parts as capacitors. They're resistors.

Miike N2MS

---------- Original message ----------
From: mstangelo@...

Jonathan,

I also used KX0R's filter. I ran out of space with 50 turns so I just overlapped the original windings with a second. layer and it worked fine.

I was concerned about stray capacitance so I checked the inductance and self resonant frequency with my N2PK VNA. The inductance measures 24uh at 3.5 Mhz so I removed 5 turns to get 22uh at 3.5 Mhz.

The adjustments went up went according to the directions and I was able to get 5watts out on all bands at 12 volts.

I spent the holiday time off building and operating this rig. I manually soldered the compoments and all went well. I had some difficulty visually verfiying the solder connection with the 0603 caps because the pads were not long enough; the solder connection is under the component.

I thank Steve for the tremendous effort he put into designing this rig and look forward to his future creations.

73,

Mike N2MS

2587. Re: [AT_Sprint] Re: problems with ats3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-03 00:43:42 UTC
From: Michael Harnage
Topic: 2568 Message: 2587

You could try reflashing the program into the MPU.
Steve detailed a nice simple way to do it with nothing
more that some resistors and cabling. Search the
archive for a description. But I think there is still
soemthing else wrong. Can you take a closeup detailed
picture of this section of the board and post it
somewhere? Or send direct to my email address?

If you use flux while building the board it may be
worth while to clean the board. I have use a soft
toothbrush with acetone with success. Got to be
careful with some of the plastic parts though. :) The
smt parts can handle it though.

What is your power supply? If it's a 9v rectangular
battery try something with a little more ooomph and
see what happens.

-mike

--- dave3wave <dabrog@...> wrote:

> Hi Mike
> When I give a series of dots it gets only one dot..
> Maybe I gave some
> rubbish in the menu-system. Is it possible to do a
> master reset?
>
> David
>

_____
Looking for last minute shopping deals?
Find them fast with Yahoo! Search.
http://tools.search.yahoo.com/newsearch/category.php?category=shopping

2588. Re: [AT_Sprint] Re: problems with ats3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-03 02:30:31 UTC
From: Steven Weber
Topic: 2568 Message: 2588

>I took the cap away -> no success, the same behavior..... There was
>abt. 0.3V at pin8 of u6.

Check the pull up resistor to that pin. Bad connection to the pull up resistor and you won't have the 3.5V on the pin! You should measure 47K to the 3.5 V supply to pin 8 of the MPU. If you don't then there is no connection to the resistor!

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2589. Re: problems with ats3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-03 09:41:08 UTC
From: dave3wave
Topic: 2568 Message: 2589

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
>
> >I took the cap away -> no success, the same behavior..... There was
> >abt. 0.3V at pin8 of u6.
>
> Check the pull up resistor to that pin. Bad connection to the pull up
> resistor and you won't have the 3.5V on the pin! You should measure
47K to
> the 3.5 V supply to pin 8 of the MPU. If you don't then there is no
> connection to the resistor!
>
>
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com
>

Hi Steve
The pull up resistor is R43 - correct? Between pin2 and pin7 of u6 I
have exactly 47kOhm. R43 seems to be ok.

David

2590. Re: problems with ats3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-03 09:44:01 UTC
From: dave3wave
Topic: 2568 Message: 2590

```
--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:
>
> You could try reflashing the program into the MPU.
> Steve detailed a nice simple way to do it with nothing
> more that some resistors and cabling. Search the
> archive for a description. But I think there is still
> soemthing else wrong. Can you take a closeup detailed
> picture of this section of the board and post it
> somewhere? Or send direct to my email address?
>
> If you use flux while building the board it may be
> worth while to clean the board. I have use a soft
> toothbrush with acetone with success. Got to be
> careful with some of the plastic parts though. :) The
> smt parts can handle it though.
>
> What is your power supply? If it's a 9v rectangular
> battery try something with a little more ooomph and
> see what happens.
>

Hi Mike
I cleaned the board with acetone. I took 12V dc: always the same
situation: pin8 0.3-0.5V and pin9 3.5V.

David

>
------------------------------------------------------------------------------
> Looking for last minute shopping deals?
> Find them fast with Yahoo! Search.
http://tools.search.yahoo.com/newsearch/category.php?category=shopping
>
```

2591. Repair ATS3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-03 11:39:25 UTC
From: dj3kk.fred
Topic: 2591 Message: 2591

I was told by a friend that his ATS3a always started in
straight-key-mode whether any paddle or key was connected or not.
There was no ELBUG-function.
The voltage at P2.0 (dash) showed less than 1.6Volt, decreasing
the pull-up resistor showed no effect, reprogramming with the JTAG
interface was no help, too. P2.0 did not operate in high input mode.
So I decided to cut off the F1121A and solder a new one. Programming
it offered a new problem : all morse announcements ended with 2 dots
eg :w = s, 3 = 5, m = i, ect. so it was not possible to understand the
announcement. I thought about 2 possibilities to avoid the fault.
I could solder and try another new chip or I could try to modify
the source-code - for me the simplest way
(tnx Steve for publishing the code). After some simulation
it became obvious that there was a failure when reading out
register r14. So I replaced r14 by r6 and defined
a ramcell for r6 (&r6rp = r6) . After reprogramming the ATS3a with
the modified code it became alive with all functions as before.

2592. Re: problems with ats3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-03 16:24:07 UTC
From: dave3wave
Topic: 2568 Message: 2592

Hi
I'm for the next 3 days offline.
@Mike: I'll do it with the photos.

David

2593. Re: [AT_Sprint] Repair ATS3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-03 18:32:09 UTC
From: Michael Harnage
Topic: 2591 Message: 2593

Fred,

Nice analytical work and solution!

Thanks for sharing.

-mike/w1mt

--- "dj3kk.fred" <dj3kk.fred@...> wrote:

> After
> reprogramming the ATS3a with
> the modified code it became alive with all functions
> as before.
>

_____
Never miss a thing. Make Yahoo your home page.
http://www.yahoo.com/r/hs

2594. ATS-3 for sale again

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-03 23:27:13 UTC
From: jess gypin
Topic: 2594 Message: 2594
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2595. RE: [AT_Sprint] ATS-3 for sale again

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-04 01:07:48 UTC
From: Dale Putnam
Topic: 2594 Message: 2595

Has it been spoken for yet?
Do you have a preferred method of payment?--... ...--Dale - WC7S in Wy

To: AT_Sprint@yahoogroups.comFrom: ontarget1911@gmail.comDate: Thu, 3 Jan 2008 16:27:13 -0700Subject: [AT_Sprint] ATS-3 for sale again

The sale of the ATS-3 (not B) fell through and I now need another buyer. Original ATS-3 only opened for inventory and looking at.
$140.00 and shipping Priority.

Jess AE0CW
303.661.9110

_____
Get the power of Windows + Web with the new Windows Live.
http://www.windowslive.com?ocid=TXT_TAGHM_Wave2_powerofwindows_122007

2596. RE: [AT_Sprint] ATS-3 for sale again

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-04 01:08:58 UTC
From: Dale Putnam
Topic: 2594 Message: 2596

Oh nutz... forgot to change the address. Sorry--... ...--Dale - WC7S in Wy

_____
Don't get caught with egg on your face. Play Chicktionary!
http://club.live.com/chicktionary.aspx?icid=chick_wlhmtextlink1_dec

2597. Hot air rework stations.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-05 03:32:58 UTC
From: Ron Kenwood
Topic: 2597 Message: 2597

Are rework stations suitable for building my B or just for taking parts off boards? Are the better than a hobby style heat gun My plan is to try and stick down stuff in stages. If used with a hot plate and solder paste, will one of these blow those flea speck sized parts all over the shack or can they be controlled?

If they will work, what do I look for in a used unit?

Ron W3ZV

2598. RE: [AT_Sprint] Hot air rework stations.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-05 03:43:16 UTC
From: Dale Putnam
Topic: 2597 Message: 2598

Hi Ron,
The embosser works well, and with a soft touch, you can keep from blowing things around. The cup warmer routine works well, for preheating and making the additional heat less directed from the embossing or heat gun. The full heat gun is rather more than I would be comfortable with, too much uncontrolled air flow. For nearly the price of an ATIII, you can obtain a SMT rework station, they provide hot air, and controlled flow is easy, the soldering tips are pretty nearly the correct size, considering these are built for pros to work with smt boards. For the AT build, I am enjoying playing with an embossing wand. For the serious stuff, I will take it to the bench and work it with the rework station. That includes any of the parts that give a hint that the paste won't hold 'em. I prefer to work 'em once, rather than spend the rest of the day wishing I had. However, one trick that I use, sometimes... is the addition of a large... no make that a huge bowl that I work the paste on the board to heat with air flow. I've found that once in a while... the little critters grow wings... and even tho they don't have a taste for Red Bull, them wings will carry them right off the board.. and drop into the bowl. No diggin around on the floor. Yes, it is a bit unhandy to reach over the edge... tiny price to pay for instead of the alternative... I figure.
Good Luck, --... ...--Dale - WC7S in Wy

To: AT_Sprint@yahoogroups.comFrom: w3zv@...: Fri, 4 Jan 2008 22:32:58 -0500Subject: [AT_Sprint] Hot air rework stations.

Are rework stations suitable for building my B or just for taking parts off boards? Are the better than a hobby style heat gun My plan is to try and stick down stuff in stages. If used with a hot plate and solder paste, will one of these blow those flea speck sized parts all over the shack or can they be controlled?If they will work, what do I look for in a used unit?Ron W3ZV

_____
Share life as it happens with the new Windows Live.
http://www.windowslive.com/share.html?ocid=TXT_TAGHM_Wave2_sharelife_012008

2599. Re: [AT_Sprint] Hot air rework stations.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-05 14:36:06 UTC
From: W2AGN
Topic: 2597 Message: 2599

Ron Kenwood wrote:
> Are rework stations suitable for building my B or just for taking parts
> off boards? Are the better than a hobby style heat gun My plan is to try
> and stick down stuff in stages. If used with a hot plate and solder
> paste, will one of these blow those flea speck sized parts all over the
> shack or can they be controlled?
>
> If they will work, what do I look for in a used unit?
>
> Ron W3ZV
>

I got a Madell 850B on ebay a year or so ago for <$100. It is great! The small nozzle allows you to do one part at a time, if you wish. The air flow and temperature are front-panel controlled. I don't mess with hot plates, drink warmers, etc. I set 5-10 parts in the little dabs of solder paste, then apply heat from the Madell, I have a formica top on my workbench, so I don't even bother with a metal plate any more. Fast, easy and no messing around. My ATS-3B worked first time around, the first of my ATS rigs to do so.

--
+-+-+-+-+-+ w2agn@...
|W|2|A|G|N| Celebrating 50 years
+-+-+-+-+-+ of Amateur Radio
1958-2008 http://w2agn.net
-.- ...-- .... .-.. ..-

2600. Re: Hot air rework stations.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-05 16:09:44 UTC
From: jaakko330
Topic: 2597 Message: 2600

--- In AT_Sprint@yahoogroups.com, Ron Kenwood <w3zv@...> wrote:

Hi Ron,

> Are rework stations suitable for building my B or just for taking parts
> off boards? Are the better than a hobby style heat gun My plan is to
try

I used a new Madell QK857, not cheap though. With the air flow set to half maximum I did not have any problems with the parts moving. I did preheat the board to about 100-140 C and used coins as spacers on the corners. Just do not put too much solder paste on the pads. I checked the amount of paste before heating under magnifying glass and removed extra with a tooth pick. After first soldering it is easy the add small amount of paste with a tooth pick, preheat and use the hot air tool to melt the paste. Even solder sucking wick works with the hot air to remove extra solder. For me about 235 C air temperature worked fine with the lead free paste. This is at upper limit of the specifications for the paste. After some practice it is probably good idea to do all the resistors and then capacitors on each side. Then semiconductors the same way and finally the through hole parts.

73, Jaakko OH7BF/F5VGL

2601. Re: [AT_Sprint] Hot air rework stations.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-05 18:29:03 UTC
From: Kurt Savegnago
Topic: 2597 Message: 2601

> I got a Madell 850B on ebay a year or so ago for
> <$100. It is great! The small
> nozzle allows you to do one part at a time, if you
> wish. The air flow and
> temperature are front-panel controlled. I don't mess
> with hot plates, drink
> warmers, etc. I set 5-10 parts in the little dabs of
> solder paste, then apply
> heat from the Madell, I have a formica top on my
> workbench, so I don't even
> bother with a metal plate any more. Fast, easy and
> no messing around. My ATS-3B
> worked first time around, the first of my ATS rigs
> to do so.
>
>
> --
> +-+-+-+-+-+ w2agn@...
> |W|2|A|G|N| Celebrating 50 years

Holy Cripes!

You mean you can do a few parts at a time if you
want to? I got one of those too off of ebay and
didn't know how it would work. Sitting out in the
garage.
Been waiting for a block of time so I could set all
the parts of the ATS-3B at once then go at it.
If it is possible to set a few parts and use the
Mandell to solder them and then do another block of
parts at another time, that would help me out alot.

Kurt KC9LDH

Slackware user since 1994

2602. Re: [AT_Sprint] Hot air rework stations.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-05 21:13:55 UTC
From: W2AGN
Topic: 2597 Message: 2602

Kurt Savegnago wrote:

>
> Holy Cripes!
>
> You mean you can do a few parts at a time if you
> want to? I got one of those too off of ebay and
> didn't know how it would work. Sitting out in the
> garage.
> Been waiting for a block of time so I could set all
> the parts of the ATS-3B at once then go at it.
> If it is possible to set a few parts and use the
> Mandell to solder them and then do another block of
> parts at another time, that would help me out alot.
>
> Kurt KC9LDH
>
> Slackware user since 1994

I just do a few at a time, mainly because I bump them off the pads too easily.
With the Madell it is no problem. You could even do 1 at a time.

John W2AGN

2603. Sourcecode ATS3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-06 12:47:42 UTC
From: dj3kk.fred
Topic: 2603 Message: 2603

I like to modify some routines of the ATS3a-code and would appreciate to get a list of the flag meanings : flags and bflag as Steve has published it in the new ATS3b-sourcecode. Steve or Mike, may you help me please - tnx.
72' Fred, DJ3KK

2604. Re: problems with ats3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-06 13:01:51 UTC
From: dave3wave
Topic: 2568 Message: 2604

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
>
> >I took the cap away -> no success, the same behavior..... There was
> >abt. 0.3V at pin8 of u6.
>
> Check the pull up resistor to that pin. Bad connection to the pull up
> resistor and you won't have the 3.5V on the pin! You should measure
47K to
> the 3.5 V supply to pin 8 of the MPU. If you don't then there is no
> connection to the resistor!
>
>
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com
>

Hi Steve
I'm back aganin. I have 47kOhm between pin2 and pin9 (dot) but I have
abt. 2 MOhm between pin2 and pin8 (dash)!!
Between pin2 and pin7 I have 47kOhm. R43 seems to me ok.

David

2605. Re: [OFFLIST] Sourcecode ATS3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-06 13:03:07 UTC
From: Michael Harnage
Topic: 2603 Message: 2605

Fred,

I'd be happy to help on any specific questions you may
have. They are usually easy to figure out because of
the name but some of the names might be confusing. Let
me know which ones you want help with.

Have you seen the alternate code I have published for
the ATS series? < http://w1mt.qrpradio.com/ats3.html >

-mike/w1mt

--- "dj3kk.fred" <dj3kk.fred@...> wrote:

>
> I like to modify some routines of the ATS3a-code and
> would appreciate
> to get a list of the flag meanings : flags and bflag
> as Steve has
> published it in the new ATS3b-sourcecode. Steve or
> Mike, may you help
> me please - tnx.
> 72' Fred, DJ3KK
>

Be a better friend, newshound, and
know-it-all with Yahoo! Mobile. Try it now.
http://mobile.yahoo.com/;_ylt=Ahu06i62sR8HDtDypao8Wcj9tAcJ

2606. Re: [AT_Sprint] Re: problems with ats3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-06 13:07:28 UTC
From: Michael Harnage
Topic: 2568 Message: 2606

Recheck soldering on R39.

-mike

--- dave3wave <dabrog@...> wrote:

> Hi Steve
> I'm back aganin. I have 47kOhm between pin2 and pin9
> (dot) but I have
> abt. 2 MOhm between pin2 and pin8 (dash)!!
> Between pin2 and pin7 I have 47kOhm. R43 seems to me
> ok.
>
> David
>

Be a better friend, newshound, and
know-it-all with Yahoo! Mobile. Try it now.
http://mobile.yahoo.com/;_ylt=Ahu06i62sR8HDtDypao8Wcj9tAcJ

2607. Re: problems with ats3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-06 14:27:06 UTC
From: dave3wave
Topic: 2568 Message: 2607

--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:
>
> Recheck soldering on R39.
>
> -mike
>

Hi Mike
I measured the resistanc over R39 and got abt. 2 MOhm (instead of
47kOhm!). The resitor is labled with 473 - that's ok. I took R39 away
and it seams R39 is dead. I have no 47kOhm-smd-resistor here. I tried
it with a normal one.... no chance.
I'll look tomorrow for a new one

David

_____
> Be a better friend, newshound, and
> know-it-all with Yahoo! Mobile. Try it now.
http://mobile.yahoo.com/;_ylt=Ahu06i62sR8HDtDypao8Wcj9tAcJ
>

2608. Re: [AT_Sprint] Sourcecode ATS3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-06 14:29:18 UTC
From: Vojtěch Bubník
Topic: 2603 Message: 2608

Hi Fred.

> I like to modify some routines of the ATS3a-code and would appreciate
> to get a list of the flag meanings : flags and bflag as Steve has
> published it in the new ATS3b-sourcecode. Steve or Mike, may you help
> me please - tnx.

You may download the modified ATS-3a source code from pocketdigi.sourceforge.net and use windiff to compare the original Steve's version and mine. My code is mostly extension of Steve's one and I mostly replaced constants by defines, so it shall be easy to decipher the magic numbers.

73, Vojtech OK1IAK

2609. Toroid Winding Styles.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-07 01:17:54 UTC
From: kc7fys
Topic: 2609 Message: 2609

I spent my holidays working through the KXoR filter module mods. I didn't get the results he did, but 5.2 watts on the 17M and nearly that on the 20M module made me happy. Actually, I don't know if I trust any wattmeter in my shack. Everything's calibrated off of something else that wasn't calibrated in the first place kind of thing. Anyway, question: I noticed in the flickr ATS photo group some modules wound loosely, some wound tightly. KX0R seemed to wind pretty close to the toroid, which requires a good strong tug on each turn to snug up the wire. Myself, I like to make the windings hug the toroid closely--but what's accepted as the best practice? I see some where the wire is slinky-like around the toroid--a very loose fit. I wouldn't be comfortable with that myself. But I am far from knowledgeable on the subject.
How are yours wound?

2610. Re: [AT_Sprint] Toroid Winding Styles.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-07 01:22:24 UTC
From: Bill Griffin
Topic: 2609 Message: 2610

I pull mine tight. All wound up tight, since I gave up drinking,
something needs to get tight once in a while.

Bill, ni5x.

>
> How are yours wound?
>
>

2611. ANNOUNCE: PocketDigi 1.0.11 released

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-07 01:34:12 UTC
From: Vojtěch Bubník
Topic: 2611 Message: 2611

Hi gang.

I released PocketDigi 1.0.11 at http://pocketdigi.sourceforge.net. There are following new features implemented: RSID, PSK63F, PSK125, sampling rate conversion, tx delay/tx tail/ats3 preamble/postamble settings, keyboard accelerators, Handheld PC 2000 improvements, Waterfall FFT optimization and basic Smartphone support.

RSID is the famous Reed Solomon ID of Patrick Lindecker F6CTE. Patrick added this feature into his MultiPSK software year ago. Until now only MultiPSK (and since last week also Cesco's FDMDV?) implemented this feature. Instead of CW ID or Image ID, a sequence of 15 MFSK tones is sent at the beginning of every TX to identify mode and center of frequency of the following data stream. RSID has very high redundancy, so if the RSID is decoded with zero or one error, there is extremely low probability of false detection. The feature is very handy to automatically detect mode and submode of rare modes and therefore encourages experimentation. Also it is easy to tune MFSK16 mode as no tuning is needed at all. I found RSID very useful with ATS-3b transceiver, at it has only narrow not very flat CW filter. Even if the whole digital signal does not fit into the filter, if the mode has high enough redundancy and is strong enough, it will be still decoded if tuned properly. But without seeing the whole spectrum of the signal on waterfall, it is very difficult to tune it. With RSID receive on, one only needs to get the RSID signal into receiver passband to make sure the signal will be tuned correctly.

PSK63F is a nice mode invented by Nino Porcino IZ8BLY. It is a crossbreed between MFSK16 and PSK63. It uses convolution code and varicode of MFSK16, but for hardware layer it uses binary phase shifting at 63.125Bd. PSK63F tries to fight ionospheric flutter by faster phase modulation and forward error correction. It is well known that BPSK31 does not survive polar flutter. BPSK63 is better, but one loses 3dB. For DX work, PSK63F could gain back that 3dB and still show lower sensitivity for polar flutter.

PSK125 is nothing more than 2x faster, 2x wider and 3dB less sensitive BPSK than PSK63.

I finally added sample rate conversion. It took me a bit longer, because it is done in fixed point arithmetic again to make it computationally feasible on Windows CE devices. I have good experience with my iPaq 3630 and Jornada 720, they show very little clock error. But my new laptop shows as high as 4% error on TX and 2% on RX. Even PSK31 did not work at that level of clock error.

With the release of ATS-3b kit by Steve KD1JV, I received reports about having trouble to get the communication interface working. ATS-3b is controlled by Manchester modulation generated by sound card, which is translated to digital levels by a simple slicer. Some sound cards generate ugly transient response at the start and end of sound. I added four new parameters to control the shape of transient response: TX delay, TX tail, ATS3 preamble and ATS3 postamble. The first two are silence intervals. The next two are intervals of Manchester idle tone. The idle tone is shaped by raised cosine function now to minimize clicks, if it is longer than 50msec. Also Jornada 720 generates some ugly click about 200msec after sound output opening. I was not able to find out the cause, but setting TX

delay to 250ms either avoids the click or at least shifts the modulation after the click.

I added keyboard accelerators for accessing menu from keyboard. According to Microsoft GUI guidelines for Pocket PC platform, one shall not use keyboard accelerators. They work on my device though, so I leave them there. Menu pops up at Alt-T for tools, Alt-M for Modem, Alt-A for mAcros etc. F1-F12 execute macros on desktop.

Until now, I relied on testing of Handheld PC 2000 build by Helge Tefts. Last month I bought Jornada 720 on e-bay for whooping $40+shipping. I did some user interface improvements on that platform, made some missing features available like context menus on RX/TX windows etc. Jornada 720 has a two LiIon cell accu. I bet ATS-3b may be powered from the handheld's accu.

I replaced complex FFT by a real FFT for waterfall calculation, which lowers current consumption. Now all the DSP calculation uses less current than user interface updates + FEC and certainly less than backlight on my iPaq 3630. This is quite interesting. It shows that for HAM radio digital modems and PDA sized display, DSP CPU will be probably counter-productive as DSP is usually clumsy for general purpose computing. To improve current consumption even more, I would probably need to replace some stock user interface components from Microsoft like RX window by a custom one or get back to a custom design with very small monochrome display and simple user interface.

Ondra OK1CDJ bought himself a Smartphone HTC S710. The device does not have a touch screen and did not show menu in PocketDigi-1.0.10. Smartphone only accepts menu with two main level items. I modified PocketDigi to detect Smartphone and modify menu accordingly. There were some more changes to make it work on Smartphone. Here is a screenshot from Ondra running PocketDigi on Smartphone and FT817.
http://blog.ok1cdj.com/2008/01/ft-817-smartphone-digimdy-prvn-testy.html
In my opinion the non touch screen devices are more suitable for portable hamming as they are more rugged. Also Smartphones are designed for less energy consumption, often using smaller display, slower CPU, having integrated thumb keyboard and handsfree connector.

Ondra's Smartphone runs on Windows Mobile 6.0. He uses a tool to emulate mouse cursor to access tuning on the waterfall and to switch between RX/TX windows. I plan to improve usability to be able to tune by the D-pad. If you have a Windows Smartphone with WM5 and newer (no touch screen), please give it a try. I need feedback as I do not own any. I configured PayPal donations at pocketdigi.sourceforge.net. Please consider donating small amount. From the donations I will buy a Windows Smartphone to develop on.

If you have any problems with the software, if you have suggestions for improvement, please do not hesitate to send me an e-mail.

At the end of this e-mail is a list of changes since 1.0.10.

73, Vojtech OK1IAK

2007-01-01 Vojtech Bubnik <bubnikv@...>
* 1.0.11-pre4
- Added configuration of TX delay, TX tail, ATS3 preamble and ATS3 postamble
- Channels menu split to Channels and Modem to fit on 240 row screens.
- Handheld PC 2000 (Jornada 720 and others): Dialog boxes have OK and X
buttons on title bar now.
- Basic support for Windows Mobile 5.0 Smartphones with at least 240x240

screens.
You will still need a mouse emulator utility to control waterfall and switch between RX/TX windows.

2007-12-22 Vojtech Bubnik <bubnikv@...>
* 1.0.11-pre2
- Added RSID support. Thanks to Patrick Lindecker F6CTE for Delphi source and support.
- Default value of TX prefetch buffers set to 3 on behalf of user report.
- Sample rate correction finalized. Automatic sample rate detection based on user expereince with MultiPSK.
- Added menu accelerators. Very useful when using device with internal or external keyboard.
Alt-T: tools, Alt-C: channels, Alt-M: Modems, Alt-A: mAcros
- Added F1-F12 function key accelerators to execute macros and Ctrl-F1-F12 to edit macros.
- Handheld PC 2000 (Jornada 720 and others): Dialog windows are now centered on the screen.
- Handheld PC 2000 (Jornada 720 and others): Bugfix - menu is displayed again.
- Handheld PC 2000 (Jornada 720 and others): Context menu on RX/TX windows opens on Alt-Tap or double tap.
- Battery consumption improvement: Waterfall calculation optimized.

2007-11-18 Vojtech Bubnik <bubnikv@...>
* 1.0.11-pre
- Added PSK63F and PSK125 modes
- Mode dependent macros
- Sample rate correction library ported

2612. Re: [AT_Sprint] Re: problems with ats3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-07 04:47:20 UTC
From: Steven Weber
Topic: 2568 Message: 2612

>I measured the resistanc over R39 and got abt. 2 MOhm (instead of
>47kOhm!). The resitor is labled with 473 - that's ok. I took R39 away
>and it seams R39 is dead. I have no 47kOhm-smd-resistor here. I tried
>it with a normal one.... no chance.
>I'll look tomorrow for a new one

Send me a SASE and will replace the resistor. In the mean time, you can
tack in a 1/4 watt resistor, putting one end on the dash tap of the jack
and the other to any convenient place which has the 3.5V supply on it.
Value is not critical, anything between say 10K and 100K will work for now.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2613. Re: Toroid Winding Styles and Wattmeters

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-07 07:02:04 UTC
From: radio_kx0r
Topic: 2609 Message: 2613

--- In AT_Sprint@yahoogroups.com, "kc7fys" <kc7fys@...> wrote:
>
> I spent my holidays working through the KXoR filter module mods. I
> didn't get the results he did, but 5.2 watts on the 17M and nearly
> that on the 20M module made me happy. Actually, I don't know if I
> trust any wattmeter in my shack. Everything's calibrated off of
> something else that wasn't calibrated in the first place kind of
> thing. Anyway, question: I noticed in the flickr ATS photo group some
> modules wound loosely, some wound tightly. KX0R seemed to wind pretty
> close to the toroid, which requires a good strong tug on each turn to
> snug up the wire. Myself, I like to make the windings hug the toroid
> closely--but what's accepted as the best practice? I see some where
> the wire is slinky-like around the toroid--a very loose fit. I
> wouldn't be comfortable with that myself. But I am far from
> knowledgeable on the subject.
> How are yours wound?
>

I share your comments about wattmeters. Measuring RF power accurately is not easy. The best tip I have is that the Norcal Dummy Load does a pretty good job of measuring voltage that you can use to figure your power. The load is very close to 50 ohms. My MFJ-259B said it was near-perfect at HF. My DVM, measuring at DC, agreed well. If your DVM is accurate, you will get good numbers from the Norcal load and the chart in the manual. I have several similar homemade loads with detectors, and they all agree pretty well at the 5W level.

I wind my toroids as tight as I can pull without hurting myself or the toroid. For thick wire, #22 or larger, I use smooth pliers to pull. The #26 in my ATS-3B modules is wound hand-tight - pliers are not necessary. Fred KT5X uses a pencil in a vise (tapered point-end) to hold the toroid, so it isn't held by hand. I learned to hold it in one hand and pull the wire with the other.

Another trick is to stretch your wire before winding it. This is to make it smooth and even. You just need to stretch it enough that is goes straight - no more. You can feel it. Magnet wire will stretch several percent before breaking, but you just need to pull firmly to make it straight. Obviously thin wire needs a very gentle pull, while #18 and larger require serious force using tools. Be careful not to damage the wire at a point of stress - normally I cut the wire back from a stress point, like where I had it in the vise or pliers.

Even with a tight wind, there will be enough looseness that the coils will be easy to adjust. The adjustments are part of how you get the band modules set up to improve power and/or efficiency. You need the

turns tight enough that they stay put when you spread them or move them closer. I suggest a dab or two of hot glue to secure the toroids when you're satisfied with your adjustments - otherwise just bumping them while handling could change the inductance enough to affect the match.

Commercially produced toroids are perfectly wound by incredible machines. If you see one of these machines in action, you will always feel weird winding toroids by hand. The machines wind them very tight.

There is some variation among the cores we use. Most of our powdered iron toroids are made ny Micrometals, although they may be sold by various distributors. There is good information at their website:

http://www.micrometals.com/index.html

The tolerances on Al for the type 2 and type 6 core material we use are +/- 5%. This means we possibly might see a variation of up to 10% in Al. I have some 20-year old Micrometals type 2 material that is a bit different from today's similar cores, but it's probably within 5 or 10%. The point is that even if you wind exactly like Steve Weber or me, you may not get exactly the same inductance. Also your capacitors have variations. Fortunately, adjusting the windings is pretty easy.

As said earlier, I think 5W is the safe maximum for a good adjustment, with a 12.0V supply measured key-down at the rig's power connector, before the protection diode (not the rig's own measurement, which will be less); and that's only if the adjustment doesn't cause too much current draw. Even at 5W the current protection may trip easily.

This all relates to the wattmeter error, because if your wattmeter reads 10% too low, you could end up adjusting your rig for too much current, or worse. I think Steve's suggestion of 4.5W at 12V is pretty wise for the masses, considering the various errors and how they stack up.

72 and happy winding...

Carey
KX0R

2614. Re: problems with ats3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-07 19:48:39 UTC
From: dave3wave
Topic: 2568 Message: 2614

>
> Send me a SASE and will replace the resistor. In the mean time, you can
> tack in a 1/4 watt resistor, putting one end on the dash tap of the jack
> and the other to any convenient place which has the 3.5V supply on it.
> Value is not critical, anything between say 10K and 100K will work
for now.
>
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com
>

Hi Steve
I got one from my qrl. Now it's ok. The paddles works perfectly! With
the correct schematics was it easy to find the problem. Tnx for the help.

David

2615. Re: [AT_Sprint] Items for sale and sold

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-07 21:47:04 UTC
From: jess gypin
Topic: 2551 Message: 2615
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2616. WTB: Unbuilt ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-07 22:32:06 UTC
From: John Harper
Topic: 2616 Message: 2616

Anyone have an unbuilt ATS-3B they'd like to sell?

Thanks and 73,

John AE5X
http://www.ae5x.com

2617. Re: Trouble with new ATS-3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-09 06:22:00 UTC
From: David Packard
Topic: 2454 Message: 2617

Thanks for the description of the trimmer capacitors, Mike VE3EQP. This kit is an ATS-3a. My Bee kit is waiting for me to get this radio going! I was able to tune the filter boards for maximum receive sensitivity, but it is still low.

Steve, I checked Q1 and Q2. The gate of Q1 exhibits a voltage of 0, while that of Q2 is 3.5v dc. The latter reading is low. The solder joints look good. I reheated the joints of both devices, plus other solder joints in the area. When I rechecked the voltages, they had not changed.

I looked carefully at LF3 on the filter board (40m and 20m). It is difficult to see the wires entering the top side of the board, now that the in-line pins are there. Again, everything looks ok and I reheated the solder connections. I can't entirely eliminate the possibility that one or more of the magnet wires had too much coating remaining. Should I remove LF3 to be sure? Is there a way to check them while they are in-circuit?

Thank you VERY much for your assistance. 72/73, Dave K1YHR.

2618. Re: Trouble with new ATS-3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-10 00:29:09 UTC
From: radio_kx0r
Topic: 2454 Message: 2618

--- In AT_Sprint@yahoogroups.com, David Packard <dpackard@...> wrote:

Dave,

Do you have normal receiver performance on any band? Or do you have low sensitivity on every band?

If one band works OK, your main board is probably OK, and you need to look for problems on your weak-sounding filter modules

If all bands are affected similarly with the same low sensitivity, it's more likely your problem is on the main board. If so, study the schematic and PC board to locate the various connections in the input signal path. It's a little tricky with the two boards, three schematics, and various designators. For the ATS-3A your signal path on receive is:

1) From antenna jack, through L4, and to J1-7 on main board (MPU/DDS/TX CIRCUITS schematic)
2) To P7 on the PA filter board (Filter Board Schematic)
3) Through the Transmit Filter to P5 on filter board
4) To J1-5 on the main board and to the PA Output
5) Through C47 and T-R switch Q2 to J1-2 on the main board
6) Back to the filter board to P2
7) Through LF3 and the rest of the Receiver Filter to P1. Note that there are different circuits used for 80M & 20M and 40M & 30M in these filters for the ATS-3A. The signals still go to P1 for all bands.
8) To J1-1 on the main board, and to the Receiver Input (Rx IN, upper left, Receiver schematic). The receiver input is labelled J1-4 on the Receiver schematic, but that's an error - it's J1-1.
9) Pin 1 of First Mixer U1, SA612AD.
10) Through the rest of the receiver.

One possible area to look at is the T-R switch consisting of Q1 and Q2. These two 2N7002 mosfet switches work in inverse fashion - when one is on, the other is off. When receiving, Q1 is off, so it looks like an open circuit; and Q2 is on, so it conducts and passes the received signal through from the PA circuit to the receiver input via J1-2. So when receiving, we expect to see a "high" control voltage on the MUTE line to Q2's gate. This turns on Q2. But Q1 must be off, since otherwise it would short our received signals to ground; so we need a "low" signal on the T/R line to the gate of Q1.

For RECEIVE we should see:

Q1 gate low (near zero)
Q2 gate high (about 3.5V)

When transmitting, the control signals are reversed. We want Q2 to be off, so the strong signals from the PA don't go into the receiver. This means Q2's gate must be low. Likewise, Q1 is turned on, to short out transmit signal that leaks through Q2, so it's further reduced. When Q1 is on, its gate must be driven high.

For TRANSMIT we should see:

Q1 gate high (about 3.5V)
Q2 gate low (near zero)

The MUTE and T/R signals come from pins 20 and 16 of U6, MPS430. When MUTE is high, T/R is low, for receiving. For transmitting, the signals reverse.

It sounds like you checked these and they're OK. 3.5V is a "high" condition.

Since Q1 and Q2 are T/R switches, they don't have any DC levels on the sources or drains.

Hopefully you've been able to follow the received signal path through the schematics using my description above. If so, your next choice might be to follow the signal on the boards, using the same description, now that you understand what must happen. If you have a multimeter, you can verify the connections on the drawings. There aren't many DC levels to check in this path, so you can just check the path with the unit turned off.

Visually inspect ALL the connections in the receive path using a bright light and magnifier. Look for shorts as well as opens. If you think you have a poor connection, use a meter to verify it. The soldering of your toroid wires can often be verified with a meter, but it won't reveal a short across the coil.

I had a tiny solder bridge on one of my filter modules, across a coil, on the component side of the board, that reduced my receiver's sensitivity on one band. I didn't see it, until I did a bunch of tests and verified that there had to be a problem.

If you have a signal generator and scope, you could inject a signal and follow it around the receiver with the scope. If you do this, keep the level down, well below 0 dbm, to prevent damage to the first mixer. This kind of testing may locate a short or open in the path.

If you have a stable generator but no scope, you could inject a low-level signal into the receive path at various points, while you listen, perhaps revealing where your problem is.

While the receive circuit is hard to follow on paper, the way it works is not complicated once you get familiar with it. The header

pins and jacks are very reliable and not likely to cause an open circuit. The sensitivity of the receiver is excellent, once it's working right.

I'll echo Steve's comments that most problems found are related to soldering. Visual inspection is your best tool, but you have to try really hard - use very bright light, try it at different angles, and plenty of magnification. Others have used digital cameras to make high-rez closeups that reveal problems - try this if you're able to do it.

72/73

Carey Fuller
KX0R

> Thanks for the description of the trimmer capacitors, Mike VE3EQP. This
> kit is an ATS-3a. My Bee kit is waiting for me to get this radio
> going! I was able to tune the filter boards for maximum receive
> sensitivity, but it is still low.
>
> Steve, I checked Q1 and Q2. The gate of Q1 exhibits a voltage of 0,
> while that of Q2 is 3.5v dc. The latter reading is low. The solder
> joints look good. I reheated the joints of both devices, plus other
> solder joints in the area. When I rechecked the voltages, they had not
> changed.
>
>
> I looked carefully at LF3 on the filter board (40m and 20m). It is
> difficult to see the wires entering the top side of the board, now that
> the in-line pins are there. Again, everything looks ok and I reheated
> the solder connections. I can't entirely eliminate the possibility that
> one or more of the magnet wires had too much coating remaining. Should
> I remove LF3 to be sure? Is there a way to check them while they are
> in-circuit?
>
> Thank you VERY much for your assistance. 72/73, Dave K1YHR.
>

2619. A metallic green ATS3b? Hm.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-10 00:29:11 UTC
From: kc7fys
Topic: 2619 Message: 2619

Here's my somewhat successful attempt at running my Bee through the body shop. Not professional but definitely fun. I used inkjet water-slide transfers much like t-shirt transfers for the labels. Not horrible for a first try.
http://www.flickr.com/photos/7j1awl/2181142243/
KC7FYS Jonathan

2620. Re: A metallic green ATS3b? Hm.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-10 00:45:39 UTC
From: Jim Fraser
Topic: 2619 Message: 2620

Nice, isn't the 3B an 80-15 Meter Transceiver, not 80-17 Meter?

Jim K6JF

--- In AT_Sprint@yahoogroups.com, "kc7fys" <kc7fys@...> wrote:
>
> Here's my somewhat successful attempt at running my Bee through the
> body shop. Not professional but definitely fun. I used inkjet
> water-slide transfers much like t-shirt transfers for the labels. Not
> horrible for a first try.
> http://www.flickr.com/photos/7j1awl/2181142243/
> KC7FYS Jonathan
>

2621. Re:[AT_Sprint] Re: A metallic g reen ATS3b? Hm.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-10 00:50:54 UTC
From: J. Haynes
Topic: 2621 Message: 2621

D'oh! I dropped a band! Argh.

2622. Re: A metallic green ATS3b? Hm.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-10 00:54:14 UTC
From: kc7fys
Topic: 2619 Message: 2622

And lest I not give credit where it's due, I heavily copied the work of N5BUD's excellent labels. I hope, in this case, imitation is a sincere form of flattery.

By the way, as long as I'm copying others' work... I need a decent "cheat sheet" to place inside the cover of the lid. Anybody got one they use that I can adapt to my porpoises?
Jonathan

--- In AT_Sprint@yahoogroups.com, "Jim Fraser" <jimf53@...> wrote:
>
> Nice, isn't the 3B an 80-15 Meter Transceiver, not 80-17 Meter?
>
> Jim K6JF
>
>
> --- In AT_Sprint@yahoogroups.com, "kc7fys" <kc7fys@> wrote:
> >
> > Here's my somewhat successful attempt at running my Bee through the
> > body shop. Not professional but definitely fun. I used inkjet
> > water-slide transfers much like t-shirt transfers for the labels. Not
> > horrible for a first try.
> > http://www.flickr.com/photos/7j1awl/2181142243/
> > KC7FYS Jonathan
> >
>

2623. Re: A metallic green ATS3b? Hm.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-10 00:55:53 UTC
From: kc7fys
Topic: 2619 Message: 2623

An improved URL for viewing that metallic green 3B.
http://www.flickr.com/groups/ats_qrp/pool/
Jonathan

2624. Re: [AT_Sprint] Re: A metallic green ATS3b? Hm.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-10 01:11:03 UTC
From: n0tu/Steve
Topic: 2619 Message: 2624
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2625. AA7JC's longwire tuner (?)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-10 01:30:40 UTC
From: kc7fys
Topic: 2625 Message: 2625

Hey, I got a message from zl2tch@... off of the ATS Flickr photo
pool. I've migrated many of the photos from the photos section here to
that private pool for better viewing and commenting by members of the
ATS group who do the Flickr Shuffle.
This shot: http://farm3.static.flickr.com/2112/2123238321_b20f57c842_o.jpg
...shows it clearly. It looks like a variation on the LWT tuner you
can get from NorCal. No?
Jonathan

2626. Re: A metallic green ATS3b? Hm.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-10 01:38:50 UTC
From: kc7fys
Topic: 2619 Message: 2626

The JA hams in this YahooGroup know "ZA DAISO" stores well. It's the popular variation on the 'dollar store' concept. This metallic green paint was right off the shelf. I feel inspired to go back and start labeling my other various QRP junk I've built. Maybe an entirely green metallic station! It would look good on the hood of a '73 Plymouth Duster with one of those "airfoil" rear spoilers. I recommend using inkjet decals--that was JN1GLB's idea. His are clear, though.
Jonathan

--- In AT_Sprint@yahoogroups.com, "n0tu/Steve" <n0tu.qrp@...> wrote:
>
> Excellent work John!
>
> I love the green hammertone color paint job! Was this off the self spray
> paint? (brand?) And with yellow decals really helps it sing. Also using the
> side of the case to place additional deeper menu info ...I do say ole chap
> is "brilliant"! =D
>
> Nice job for sure! Thanks for sharing!
>
> Steve/n0tu
>
>
> On Jan 10, 2008 12:55 AM, kc7fys <kc7fys@...> wrote:
>
> > An improved URL for viewing that metallic green 3B.
> > http://www.flickr.com/groups/ats_qrp/pool/
> > Jonathan
> >
> >
> >
> >
> > Yahoo! Groups Links
> >
> >
> >
> >
>

2627. Re: [AT_Sprint] Re: A metallic green ATS3b? Hm.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-10 02:06:22 UTC
From: Gil Stacy
Topic: 2619 Message: 2627
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2628. RE: [AT_Sprint] AA7JC's longwire tuner (?)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-10 02:28:18 UTC
From: Ken Lotts
Topic: 2625 Message: 2628

Hi Jonathan,

The story on that tuner goes like this..

I sure like that Elecraft QRP auto tuner.. lets have a look at the schematic..
Hmmm. I think as an experiment I will build a switched inductor chain similar to that but with a slightly larger range and then add a variable cap and make a similar tuner (but non-auto). The only trouble is the capacictor. Look at these physically small 532pf caps on Ebay (Ebay Item number: 150085706358) Perfect!
Look at this cool web site that shows how you can efficiently load up nearly anything with a "T" tuner..
http://www.dxzone.com/cgi-bin/dir/jump2.cgi?ID=3677
I think I will add another variable cap and make this thing a T tuner (now that I know the trick to make it work efficiently)
Add in a resistive bridge LED tuner.. .. done! and it weighs six ounces.
Only thing is I want a tuner that just weighs one ounce or less. so there will be another project.

Ken Lotts
aa7jc

-----Original Message-----
From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com]On Behalf Of kc7fys
Sent: Wednesday, January 09, 2008 6:31 PM
To: AT_Sprint@yahoogroups.com
Subject: [AT_Sprint] AA7JC's longwire tuner (?)

Hey, I got a message from zl2tch@... off of the ATS Flickr photo pool. I've migrated many of the photos from the photos section here to that private pool for better viewing and commenting by members of the ATS group who do the Flickr Shuffle.
This shot: http://farm3.static.flickr.com/2112/2123238321_b20f57c842_o.jpg ...shows it clearly. It looks like a variation on the LWT tuner you can get from NorCal. No?
Jonathan

2629. SMD soldering video

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-10 11:53:34 UTC
From: Gil Stacy
Topic: 2629 Message: 2629
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2630. Re: A metallic green ATS3b? Hm.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-10 13:42:24 UTC
From: Buddy Brown
Topic: 2619 Message: 2630

I think that your paint job looks really good.
72,
Buddy - N5BUD
p.s. thanks for the plug on my label.

2631. Re: SMD soldering video

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-10 17:10:26 UTC
From: radio_kx0r
Topic: 2629 Message: 2631

--- In AT_Sprint@yahoogroups.com, "Gil Stacy" <gilstacy@...> wrote:

Thanks Gil!

This is an interesting, well-photographed video - shows lots of techniques and tools. It discusses flux and shows how it's used with wire solder in some interesting ways.

The video doesn't show solder paste or hot air assembly, so it's worth looking at Cash Olsen's site for the demo of hot air soldering using paste.

The more we know, the more we can do.

72,
KX0R

> Saw this video on smd soldering and removal on www.hackaday.com.
It's just
> another man's way to solder smds. That 208 chip is fine pitched!
>
> http://www.curiousinventor.com/guides/Surface_Mount_Soldering/101
>
> 73 Gil NN4CW
>

2632. Re: Trouble with new ATS-3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-10 17:28:22 UTC
From: David Packard
Topic: 2454 Message: 2632

Thank you, Carey! That info looks very helpful. I plan to visit Saturday with a local ham who has a well-equipped work bench. I'll let you know what we find. 72/73, Dave K1YHR.

2633. Re: [AT_Sprint] Items for sale and sold

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-10 21:41:21 UTC
From: Daniel Severance
Topic: 2551 Message: 2633

Hi Jess,
I got the package today - Thanks! Those are some small parts! I picked up a few NorCal kits ($7) to practice with surface mount before I tackle something like this!
Take care,
Dan

----- Original Message ----
From: jess gypin <ontarget1911@...>
To: AT_Sprint@yahoogroups.com
Sent: Monday, January 7, 2008 1:47:04 PM
Subject: Re: [AT_Sprint] Items for sale and sold

I need and address to send this to ok?

Jess

On 12/30/07, Ron Kenwood <w3zv@comcast. net> wrote:

Jess:

I sent e-mail yesterday via the reflector advising I would take the
QBSA. I still will unless its gone:

Ron W3ZV

jess gypin wrote:
> The ATS-3B and ATS-3 that I had are spoken for.
> I still have the QRP Base Station Accessory $45.00
>
> Jess AEoCW <><

>

<!--

#ygrp-mkp{
border:1px solid #d8d8d8;font-family:Arial;margin:14px 0px;padding:0px 14px;}
#ygrp-mkp hr{
border:1px solid #d8d8d8;}
#ygrp-mkp #hd{
color:#628c2a;font-size:85%;font-weight:bold;line-height:122%;margin:10px 0px;}
#ygrp-mkp #ads{
margin-bottom:10px;}
#ygrp-mkp .ad{
padding:0 0;}
#ygrp-mkp .ad a{
color:#0000ff;text-decoration:none;}
-->

```
<!--

#ygrp-sponsor #ygrp-lc{
font-family:Arial;}
#ygrp-sponsor #ygrp-lc #hd{
margin:10px 0px;font-weight:bold;font-size:78%;line-height:122%;}
#ygrp-sponsor #ygrp-lc .ad{
margin-bottom:10px;padding:0 0;}
-->

<!--

#ygrp-mlmsg {font-size:13px;font-family:arial, helvetica, clean, sans-serif;}
#ygrp-mlmsg table {font-size:inherit;font:100%;}
#ygrp-mlmsg select, input, textarea {font:99% arial, helvetica, clean, sans-serif;}
#ygrp-mlmsg pre, code {font:115% monospace;}
#ygrp-mlmsg * {line-height:1.22em;}
#ygrp-text{
font-family:Georgia;
}
#ygrp-text p{
margin:0 0 1em 0;}
#ygrp-tpmsgs{
font-family:Arial;
clear:both;}
#ygrp-vitnav{
padding-top:10px;font-family:Verdana;font-size:77%;margin:0;}
#ygrp-vitnav a{
padding:0 1px;}
#ygrp-actbar{
clear:both;margin:25px 0;white-space:nowrap;color:#666;text-align:right;}
#ygrp-actbar .left{
float:left;white-space:nowrap;}
.bld{font-weight:bold;}
#ygrp-grft{
font-family:Verdana;font-size:77%;padding:15px 0;}
#ygrp-ft{
font-family:verdana;font-size:77%;border-top:1px solid #666;
padding:5px 0;
}
#ygrp-mlmsg #logo{
padding-bottom:10px;}

#ygrp-vital{
background-color:#e0ecee;margin-bottom:20px;padding:2px 0 8px 8px;}
#ygrp-vital #vithd{
font-size:77%;font-family:Verdana;font-weight:bold;color:#333;text-transform:uppercase;}
#ygrp-vital ul{
padding:0;margin:2px 0;}
#ygrp-vital ul li{
list-style-type:none;clear:both;border:1px solid #e0ecee;
}
```

```
#ygrp-vital ul li .ct{
font-weight:bold;color:#ff7900;float:right;width:2em;text-align:right;padding-right:.5em;}
#ygrp-vital ul li .cat{
font-weight:bold;}
#ygrp-vital a{
text-decoration:none;}

#ygrp-vital a:hover{
text-decoration:underline;}

#ygrp-sponsor #hd{
color:#999;font-size:77%;}
#ygrp-sponsor #ov{
padding:6px 13px;background-color:#e0ecee;margin-bottom:20px;}
#ygrp-sponsor #ov ul{
padding:0 0 0 8px;margin:0;}
#ygrp-sponsor #ov li{
list-style-type:square;padding:6px 0;font-size:77%;}
#ygrp-sponsor #ov li a{
text-decoration:none;font-size:130%;}
#ygrp-sponsor #nc{
background-color:#eee;margin-bottom:20px;padding:0 8px;}
#ygrp-sponsor .ad{
padding:8px 0;}
#ygrp-sponsor .ad #hd1{
font-family:Arial;font-weight:bold;color:#628c2a;font-size:100%;line-height:122%;}
#ygrp-sponsor .ad a{
text-decoration:none;}
#ygrp-sponsor .ad a:hover{
text-decoration:underline;}
#ygrp-sponsor .ad p{
margin:0;}
o{font-size:0;}
.MsoNormal{
margin:0 0 0 0;}
#ygrp-text tt{
font-size:120%;}
blockquote{margin:0 0 0 4px;}
.replbq{margin:4;}
-->
```

2634. Different ATS3? And mine!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-11 03:06:22 UTC
From: kb8dns
Topic: 2634 Message: 2634

Hi All!

I built my ATS3 in March of 2005 and it worked FB right
off! My construction techniques followed most of the suggestions I
found on the web and some I came up with, couple of them are kind of
unique!
A cheap brownie pan was the best and part trays were
used and keep everything in order. I used a lighted magnifier lamp and
reading glasses and checked over my work with an old camera lens. I
also found that binoculars, backwards help! Ground everything was my
goal even to the point of boiling water in the house to prevent dry
air, drank lots of tea then!
My special tricks.... I used a 5 watt grounded
soldering pencil from RS, flattening the tip with small pliers and
shaping to a wedge point with a file. Holding the parts in place was
the real challenge! You're going to laugh at this.... I held them in
place with a long finger nail and touched the iron to the soldier and
then to the part, YES even to the SMD ICs! The only parts that gave me
trouble were the SMD resistors. I checked each and every soldered part
with a magnifier before proceeding. About three six hour stints and
the main board was done. Another two to three hours on the band
boards, I have yet to finish the 30 meter band.
Just a few on the air contacts and several cross mode
QSOs but I have listened all over with the rig! I even sent an A
(didah) on 1955 at lowest power and very brief, beautiful reception on
my Icom 746 in CW mode! Skipped the receiver all the way down to the
AM broadcast band and the upper limit is about 17 meters.
I cannot say enough about Steve's kit! I missed out on
the B model but will look forward to the next! Now about the different
ATS.... ATS3-A!?

http://www.sovtechcorp.com/sovereign_3_024.htm

Not sure about this but seems to be a tracking
transmitter of some sort, post 911? cargo containers?

72 Rod KB8DNS

2635. KX0R Portable Operation

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-11 06:53:36 UTC
From: radio_kx0r
Topic: 2635 Message: 2635

All,

KX0R may be on the air this weekend from an alpine site at 11,700' in the Colorado mountains. It's "maybe" because of uncertainties related to weather and whether our group actually reaches the hut.

My antenna will be modest at best, but the site is awesome, on the side of a high mountain near the Divide, right at treeline. If I get on, I plan to be near 7.045, 10.120, 14.065 - depending on the contest and what's available. I may jump into the contest also.

Most likely time to find me will be on 40M, around 9 PM MST Saturday night (0400 UT Sunday), or later. Saturday afternoon is another possibility - between 2 and 5 PM MST, or 2100-2400 UT Saturday. Unfortunately I can't be more specific, being part of a group of folks, and subject to many of Murphy's laws.

No promises here - just maybe. I know the rig will work if I can get an antenna up and have no other problems....

I will use my name George for CW -
72,

George Carey Fuller
KX0R

2636. Re: [AT_Sprint] KX0R Portable Operation

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-11 13:22:58 UTC
From: n0tu/Steve
Topic: 2635 Message: 2636

Good Luck Carey!
I'd be curious which hut you're XC skiing (or snow shoeing?) into?
I'll listen for you but I think were to close for 40m and above?
Maybe 80m? but antennas for 80m are a hassle in snowy conditions! Have
FUN!

Cheers, Steve/n0tu
http://www.angelfire.com/planet/goatman/

On Jan 11, 2008 6:53 AM, radio_kx0r <careyfuller@...> wrote:
> All,
>
> KX0R may be on the air this weekend from an alpine site at 11,700' in
> the Colorado mountains. It's "maybe" because of uncertainties
> related to weather and whether our group actually reaches the hut.
>
> My antenna will be modest at best, but the site is awesome, on the
> side of a high mountain near the Divide, right at treeline. If I get
> on, I plan to be near 7.045, 10.120, 14.065 - depending on the
> contest and what's available. I may jump into the contest also.
>
> Most likely time to find me will be on 40M, around 9 PM MST Saturday
> night (0400 UT Sunday), or later. Saturday afternoon is another
> possibility - between 2 and 5 PM MST, or 2100-2400 UT Saturday.
> Unfortunately I can't be more specific, being part of a group of
> folks, and subject to many of Murphy's laws.
>
> No promises here - just maybe. I know the rig will work if I can get
> an antenna up and have no other problems....
>
> I will use my name George for CW -
> 72,
>
> George Carey Fuller
> KX0R
>
>
>
>
> Yahoo! Groups Links
>
>
>
>

2637. Re: KX0R Portable Operation

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-11 14:38:38 UTC
From: jaakko330
Topic: 2635 Message: 2637

--- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@...> wrote:

Hi George,

> on, I plan to be near 7.045, 10.120, 14.065 - depending on the
> contest and what's available. I may jump into the contest also.
>
> Most likely time to find me will be on 40M, around 9 PM MST Saturday
> night (0400 UT Sunday), or later. Saturday afternoon is another
> possibility - between 2 and 5 PM MST, or 2100-2400 UT Saturday.
> Unfortunately I can't be more specific, being part of a group of
> folks, and subject to many of Murphy's laws.

You could advertise your activation on the SOTA web page http://www.sotawatch.org/ though the summit probably does not have any SOTA reference yet. Here in EU we have a few good cw operators chasing the weak signals buried in QRM. The frequencies are typically 7031 - 7033 kHz and 10116 - 10118 kHz.

73, Jaakko OH7BF/F5VGL

2638. Re: [AT_Sprint] KX0R Portable Operation

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-11 15:02:09 UTC
From: Hank Greeb
Topic: 2635 Message: 2638

You should find considerable activity on the bands. It sounds like you know about the North American QSO Party - this Saturday from 1800Z January 12 to 0600Z January 13, 2008. The maximum power level is 100 watts, so QRP stands a reasonable chance.

Good luck, and do join the fray of the NaQP.

Any QRPer should find NaQP and "interesting" experience.

72/73 de n8xx Hg

radio_kx0r wrote:
> All,
>
> KX0R may be on the air this weekend from an alpine site at 11,700' in the Colorado mountains. It's "maybe" because of uncertainties related to weather and whether our group actually reaches the hut.
>
> My antenna will be modest at best, but the site is awesome, on the side of a high mountain near the Divide, right at treeline. If I get on, I plan to be near 7.045, 10.120, 14.065 - depending on the contest and what's available. I may jump into the contest also.
>
> Most likely time to find me will be on 40M, around 9 PM MST Saturday night (0400 UT Sunday), or later. Saturday afternoon is another possibility - between 2 and 5 PM MST, or 2100-2400 UT Saturday. Unfortunately I can't be more specific, being part of a group of folks, and subject to many of Murphy's laws.
>
> No promises here - just maybe. I know the rig will work if I can get an antenna up and have no other problems....
>
> I will use my name George for CW -
> 72,
>
> George Carey Fuller
> KX0R

2639. Pocketdigi

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-12 02:35:10 UTC
From: Full Some
Topic: 2639 Message: 2639

As I was listening to some extremely powerful PSK signals on 7036.50 ish, I decided to change frequency using the CAT facility. If there was an extremely loud signal in the passband, the frequency change would not be successful. When the signal ceased or decreased in strength, a CAT frequency change was successful. The 600 hz audio must be strong enough to confuse the ATS 3B before the CAT signals are sent. Those must not be 5 watt signals as I had to turn the volume on the headphones quite low to reduce the pain.

Be a better friend, newshound, and know-it-all with Yahoo! Mobile. Try it now.

2641. First ATS-3B Contact!!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-12 23:06:36 UTC
From: Jim Fraser
Topic: 2641 Message: 2641

Made my first 3B contact this afternoon on 20m with N0NI in Iowa from the SF Bay Area. I was running 4 watts to a 20m Hamstick out on my apartment balcony through a BLT Tuner set with my Tenna Dipper. The 3B is still wired-up with temporary wires to the connectors and not in an enclosure, and was powered by my QBSA.

It was just a quick contest exchange, but it's still a contact! And I got in some practice with the Touch Keyer I am incorporating into my enclosure.

I also tried 17m and 30m with appropriate Hamsticks, but no luck. I could not get a good enough match with my 40m stick to try that band, the 3B immeidately displays 'E' when transmitting. So I might be out of luck trying to work 40m/80m from home.

Jim K6JF

2642. Re: First ATS-3B Contact!!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-13 02:55:07 UTC
From: Bill
Topic: 2641 Message: 2642

--- In AT_Sprint@yahoogroups.com, "Jim Fraser" <jimf53@...> wrote:
>
> Made my first 3B contact this afternoon on 20m with N0NI in Iowa from
> the SF Bay Area. I was running 4 watts to a 20m Hamstick out on my
> apartment balcony through a BLT Tuner set with my Tenna Dipper.

Congrats Jim,
Exciting, isn't it.
I made my first CW contacts on mine today, I had made lots of psk31 contacts with my laptop and PocketDigi, but no one would answer my cq's in CW mode with the ATS3B. Leave it to the contesters. Luck would have it, my first QSO was to California, second to Florida and third to Washington state. I just knew the next would be to Maine, but no such luck.

Good luck,
Bill, ni5x.

2643. January NAQCC Sprint

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-15 00:17:44 UTC
From: Larry Makoski
Topic: 2643 Message: 2643

This coming Wednesday evening will be the monthly NAQCC Sprint for January, 2008.

Rather than make any mistakes as to the time; I will refer you to the proper URL:

http://www.arm-tek.net/~yoel//sprint200801.html

There you will find all the details as to time, frequencies, this month's Special Award, etc.

This is a monthly event that caters to the CW veteran, the CW newcomer, straight key and bug fans. All are welcome to participate; but you must use QRP power levels to compete for awards.

Come join us and have a real good time!

73 de Larry W2LJ
NAQCC #035

2644. Re: Trouble with new ATS-3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-15 23:25:24 UTC
From: lownslow1601
Topic: 2454 Message: 2644

Last Saturday, I brought my ATS-3a, which has low receive sensitivity, to my friend, Keith WB2NVY. Keith is an EE who works on digitally-controlled power systems. The first thing that caught his attention was the short piece of RG-174 with a SO-239 at the end. We soon learned that between the connector and the center conductor pad on the board the resistance was significant and changed with manipulation of the coax. Changing the coax and connector produced a great sounding receiver. We promptly worked MN and TN during the NA QRP Party on 40m! The tx put out about 2.25 watts with a 9v battery. However, as we played with the radio, we found that moving the pc board could produce momentary loss of receiver sensitivity! After experimenting, we decided that this problem was caused by the plug size adapter I was using for my paddle. It was difficult to imagine, though, how the paddle could effect receive sensitivity.

The next morning, I hooked up the radio to the doublet I have at home and turned the radio on. My problem had returned and no amount of playing with the paddle connector, removing the paddle plug, or moving the pc board would help. I have made macrophotographs of each side of the board and I am systematically inspecting and reheating all solder connections. If this recheck does not help, I plan to bring the radio back to Keith's bench and trace signals through the receiver, as described by Carey KX0R.

72/73, Dave K1YHR.

2645. Re: [AT_Sprint] Re: Trouble with new ATS-3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-16 15:42:31 UTC
From: Steven Weber
Topic: 2454 Message: 2645

>The next morning, I hooked up the radio to the doublet I have at home
>and turned the radio on. My problem had returned and no amount of
>playing with the paddle connector, removing the paddle plug, or moving
>the pc board would help. I have made macrophotographs of each side of

Lets hope you didn't crack a capacitor, which is definately possible if you
flex the board too much!
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2646. Re: [AT_Sprint] Re: Trouble with new ATS-3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-16 16:16:36 UTC
From: Michael McShan
Topic: 2454 Message: 2646

I will agree here with Steve. I was dissatisfied with my initial effort at mounting the ATS3a in an Altoids tin (= ugly), so I decided to try again. The original mounting was a tight fit and I had trouble getting the board out. I discovered that the receiver had gone deaf. It turned out that one of the caps had cracked under pressure. I was able to track down the bad cap by injecting the antenna signal at different points in the circuit and then used a magnifier to find the bad part. After if was replaced, as was well again.

72,
Mike N5JKY
Oklahoma City, OK

On Jan 16, 2008, at 9:42 AM, Steven Weber wrote:

> >The next morning, I hooked up the radio to the doublet I have at home
> >and turned the radio on. My problem had returned and no amount of
> >playing with the paddle connector, removing the paddle plug, or
> moving
> >the pc board would help. I have made macrophotographs of each side of
>
> Lets hope you didn't crack a capacitor, which is definately
> possible if you
> flex the board too much!
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com

2647. And you thought StraightKey Nite was something. Check this out!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-17 01:33:08 UTC
From: kc7fys
Topic: 2647 Message: 2647

You know the overused expression LOL. Well, I have to say, I laughed
out loud. You thought StraightKey Nite was big--I propose HoseClamp
QRP Night! Somebody set a frequency and time, and I'm there.
http://uk.youtube.com/watch?v=l8XJHXzchBg
Jonathan

2648. Re: [AT_Sprint] And you thought StraightKey Nite was something. Check this out!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-17 01:37:31 UTC
From: Michael Harnage
Topic: 2647 Message: 2648

At one point I thought about using metal guitar finger
picks in a very similiar manner. Never did it though.
Hmmmmmmmm....

-mike

--- kc7fys <kc7fys@...> wrote:

> http://uk.youtube.com/watch?v=l8XJHXzchBg

_____
Never miss a thing. Make Yahoo your home page.
http://www.yahoo.com/r/hs

2649. Re:Re: [AT_Sprint] And you thou ght StraightKey Nite was someth ing. Check this out!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-17 01:58:18 UTC
From: J. Haynes
Topic: 2649 Message: 2649

There's always a music tie-in. Hams have a lot of musical ability. Banjo fingerpicks would work.

2650. Re: [AT_Sprint] And you thought StraightKey Nite was something. Check this out!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-17 03:15:36 UTC
From: John A. Evans - N0HJ
Topic: 2647 Message: 2650

Way cool - I think I'll try this with my old Knight T-150 transmitter ;)

73 - john - n0hj

2651. Re: And you thought StraightKey Nite was something. Check this out!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-17 14:59:18 UTC
From: ve3wmb
Topic: 2647 Message: 2651

This would be great for Pedestrian Mobile operations, the hose clamps
could easily be adjusted to fit over even heavy winter gloves!

I guess you could take this one step further and make a glove key; using
snaps or rivets attached to finger/thumb as the contacts and snaking a
couple of small insulated wires through the material of the glove.
Hmmm this gives me some ideas for the upcoming FYBO ;-)

Michael VE3WMB

--- In AT_Sprint@yahoogroups.com, "kc7fys" <kc7fys@...> wrote:
>
> You know the overused expression LOL. Well, I have to say, I laughed
> out loud. You thought StraightKey Nite was big--I propose HoseClamp
> QRP Night! Somebody set a frequency and time, and I'm there.
> http://uk.youtube.com/watch?v=l8XJHXzchBg
> Jonathan
>

2652. Re: [AT_Sprint] Re: And you thought StraightKey Nite was something. Check this out!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-17 15:17:23 UTC
From: Gil Stacy
Topic: 2647 Message: 2652
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2653. Yet another portable key invention - The "UD" key - hand held iambic key

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-17 20:11:20 UTC
From: Gary Eldridge
Topic: 2653 Message: 2653
Attachments: 6 described; binary payloads are missing from this source WARC

Hello group,

The hose clamp keying method is indeed clever. I think I'll try it but with a slight twist. I'm fond of iambic keying so a hose clamp around the thumb, first and second fingers would allow for true iambic operation with just a little practice.

In the mean time - let me offer something I've invented and been using for many years now. It is a modified 35mm film canister with a couple of push buttons mounted at a 90 degree angle from each other. It's extremely light weight and allows for iambic keying while holding the unit in one hand. You can send iambically while walking, driving or huddled up inside your sleeping bag. In fact, I mostly use it on the trail while in my sleeping bag. With my earbuds in my ears and my UD key in my hand I can lie there with my eyes closed while sending / receiving CW and the other hikers nearby think I'm sleeping. They don't hear a thing (wide band receive allowed me to listen to my buddies in SSB while I sent them CW on 20 meters). This little key along with my ATS-3 also won the grand prize in 2005 at Trail Days in Damascus, VA. After explaining to the crowd that I built a portable ham radio that has allowed me to stay in touch with my friends all over the country while hiking the Appalachian Trail, they were somewhat amused. But when I pulled the Altoids tin out of my pocket and opened the lid to show the guts, chins began to fall to the floor. Thanks Steve. We owe it all to you.

By the way - UD stands for UP / DOWN (not to mention that it is part of my callsign). I got the idea while playing around with my Icom-706 while using the UP / DOWN buttons on the microphone to send CW.

Pictures to follow. I hope they transfer.

73

Gary KC8UD

2654. Re: [AT_Sprint] Yet another portable key invention - The "UD" key - hand held iambic key

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-17 20:18:17 UTC
From: asfco@nycap.rr.com
Topic: 2653 Message: 2654

Very cool..... I want one of those!
73/72
John W2GB/6Y0B

----- Original Message -----
From: Gary Eldridge <beartrack1@...>
Date: Thursday, January 17, 2008 3:11 pm
Subject: [AT_Sprint] Yet another portable key invention - The "UD" key - hand held iambic key
To: AT_Sprint@yahoogroups.com

> Hello group,
>
>
>
> The hose clamp keying method is indeed clever. I think I'll try it
> but with
> a slight twist. I'm fond of iambic keying so a hose clamp around
> the thumb,
> first and second fingers would allow for true iambic operation
> with just a
> little practice.
>
>
>
> In the mean time - let me offer something I've invented and been
> using for
> many years now. It is a modified 35mm film canister with a couple
> of push
> buttons mounted at a 90 degree angle from each other. It's
> extremely light
> weight and allows for iambic keying while holding the unit in one
> hand. You
> can send iambically while walking, driving or huddled up inside your
> sleeping bag. In fact, I mostly use it on the trail while in my
> sleepingbag. With my earbuds in my ears and my UD key in my hand I
> can lie there
> with my eyes closed while sending / receiving CW and the other
> hikers nearby
> think I'm sleeping. They don't hear a thing (wide band receive
> allowed me to
> listen to my buddies in SSB while I sent them CW on 20 meters).
> This little
> key along with my ATS-3 also won the grand prize in 2005 at Trail

> Days in
> Damascus, VA. After explaining to the crowd that I built a
> portable ham
> radio that has allowed me to stay in touch with my friends all
> over the
> country while hiking the Appalachian Trail, they were somewhat
> amused. But
> when I pulled the Altoids tin out of my pocket and opened the lid
> to show
> the guts, chins began to fall to the floor. Thanks Steve. We owe
> it all to
> you.
>
>
>
> By the way - UD stands for UP / DOWN (not to mention that it is
> part of my
> callsign). I got the idea while playing around with my Icom-706
> while using
> the UP / DOWN buttons on the microphone to send CW.
>
>
>
> Pictures to follow. I hope they transfer.
>
>
>
> 73
>
> Gary KC8UD
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>

2655. Photos of UD key

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-17 20:27:22 UTC
From: Gary Eldridge
Topic: 2655 Message: 2655

Photos of the UD key are posted in the photo section of this group.

73

Gary KC8UD

2656. Re: [AT_Sprint] Photos of UD key

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-17 20:43:11 UTC
From: asfco@nycap.rr.com
Topic: 2655 Message: 2656

Gary:
Your pix atached to your email message
73
John W2GB/6Y0B

----- Original Message -----
From: Gary Eldridge <beartrack1@...>
Date: Thursday, January 17, 2008 3:27 pm
Subject: [AT_Sprint] Photos of UD key
To: AT_Sprint@yahoogroups.com

> Photos of the UD key are posted in the photo section of this group.
>
> 73
>
> Gary KC8UD
>
>
>
>

2657. Re: [AT_Sprint] Photos of UD key

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-17 20:50:43 UTC
From: n0tu/Steve
Topic: 2655 Message: 2657

Very nice Gary! I'll have to try that idea. I'm planning on playing in the VHF test from a local mtn top this weekend weather permitting. Single handed keying would be a huge convenience not to mention be able to send with gloves on! I'll let you know how it goes.

Thanks for sharing! Steve/n0tu

On Jan 17, 2008 8:27 PM, Gary Eldridge <beartrack1@...> wrote:
>
>
>
>
> Photos of the UD key are posted in the photo section of this group.
>
> 73
>
> Gary KC8UD
>
>

2658. Re: Yet another portable key invention - The "UD" key - hand held iambic key

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-17 23:52:06 UTC
From: Bill
Topic: 2653 Message: 2658

Gary,

It passes my test for cool too,

I ask myself, "would I be allowed to take this on the airplane?".

Prolly not.

Bill, ni5x.

2659. Re: KX0R Portable Operation

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-18 00:27:37 UTC
From: radio_kx0r
Topic: 2635 Message: 2659

--- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@...>
wrote:

KX0R was on the air from the Sangree Froelicher hut last weekend.
Our group skiied and snowshoed the 3 miles and 1500 vertical feet to
the hut at 11,700 feet, located a few miles from Leadville, CO.

I used a piece of split firewood to throw a string into a tree - this
supported a compromise antenna best described as "85 feet out the
front of the hut and 33 feet out the back". Most of the antenna was
15 feet above the snow, and the highest point was the far end at 20
ft. It could be considered an off-center-fed dipole. The hut is on
a 30-degree slope, which probably favored signals to the east.

With 3-4 feet of powder snow everywhere, I had to wear snowshoes to
get the antenna up and down.

I used a modified ALT. I worked several NA Contest stations on 20M,
including PJ5NA, before moving to 30M to ragchew. 30M was nice just
before sunset, and I had a good long chat with WE0Q at Dent, MN.
Also worked N6VOH in CA, on the wrong side of the mountain, before
the band went long.

After supper I got on 40M - worked more than 20 NA Contest stations
in just over an hour, including WH6R (wrong side of the mountain) and
VP9/K7AR.

Before turning in, I decided to see if I could match 80M. Amazingly,
I loaded up with no problem, and quickly worked 8 contest stations,
including W1TO in MA, N3QE in MD, and K4GMH in VA. 80 was so nice I
wished I'd tried it earlier, before getting sleepy.

Key points:

1) No feedline was used
2) Antenna was a real compromise
3) I carried several pieces of #22 PVC wire so I could put up
whatever would fit the site
4) The EZNEC models for the antenna, done later, were medicocre,
several db worse than a dipole on all four bands - but they don't
include the sloping ground
5) Even though the antenna was low, it radiated well from the high
mountain with the deep valley below.
6) By using a series resistor with my 3-cell lithium battery, and
with an absorbtive bridge in my tuner, I was able to tune reactive
matches without tripping the ATS-3B overcurrent detector.
8) I operated for over 3 hours, including 1 hour of ragchewing, at 5W

output, and the lithium battery dropped from 12.6V to 11.75V.
9) The ATS-3B worked perfectly
10) All the radio stuff weighed 3 lb 5 oz. Over 1 lb of this is the
pack I use for an organizer. Room for improvement!
11) Compromise is the key to successful portable operation

Sorry I couldn't do more ragchewing, but the NA Contest dominated 20,
40, and 80M.

72/73
Carey Fuller
KX0R

> All,
>
> KX0R may be on the air this weekend from an alpine site at 11,700'
in
> the Colorado mountains. It's "maybe" because of uncertainties
> related to weather and whether our group actually reaches the hut.
>
> My antenna will be modest at best, but the site is awesome, on the
> side of a high mountain near the Divide, right at treeline. If I
get
> on, I plan to be near 7.045, 10.120, 14.065 - depending on the
> contest and what's available. I may jump into the contest also.
>
> Most likely time to find me will be on 40M, around 9 PM MST
Saturday
> night (0400 UT Sunday), or later. Saturday afternoon is another
> possibility - between 2 and 5 PM MST, or 2100-2400 UT Saturday.
> Unfortunately I can't be more specific, being part of a group of
> folks, and subject to many of Murphy's laws.
>
> No promises here - just maybe. I know the rig will work if I can
get
> an antenna up and have no other problems....
>
> I will use my name George for CW -
> 72,
>
> George Carey Fuller
> KX0R
>

2660. Re: KX0R Portable Operation

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-18 00:29:46 UTC
From: radio_kx0r
Topic: 2635 Message: 2660

--- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@...>
wrote:

I uploaded two photos showing the gear and antenna used for the snow
trip - see the PHOTOS section, KX0R.

KX0R

>
> --- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@>
> wrote:
>
> KX0R was on the air from the Sangree Froelicher hut last weekend.
> Our group skiied and snowshoed the 3 miles and 1500 vertical feet
to
> the hut at 11,700 feet, located a few miles from Leadville, CO.
>
> I used a piece of split firewood to throw a string into a tree -
this
> supported a compromise antenna best described as "85 feet out the
> front of the hut and 33 feet out the back". Most of the antenna
was
> 15 feet above the snow, and the highest point was the far end at 20
> ft. It could be considered an off-center-fed dipole. The hut is
on
> a 30-degree slope, which probably favored signals to the east.
>
> With 3-4 feet of powder snow everywhere, I had to wear snowshoes to
> get the antenna up and down.
>
> I used a modified ALT. I worked several NA Contest stations on
20M,
> including PJ5NA, before moving to 30M to ragchew. 30M was nice
just
> before sunset, and I had a good long chat with WE0Q at Dent, MN.
> Also worked N6VOH in CA, on the wrong side of the mountain, before
> the band went long.
>
> After supper I got on 40M - worked more than 20 NA Contest stations
> in just over an hour, including WH6R (wrong side of the mountain)
and
> VP9/K7AR.
>
> Before turning in, I decided to see if I could match 80M.
Amazingly,
> I loaded up with no problem, and quickly worked 8 contest stations,

> including W1TO in MA, N3QE in MD, and K4GMH in VA. 80 was so nice
I
> wished I'd tried it earlier, before getting sleepy.
>
> Key points:
>
> 1) No feedline was used
> 2) Antenna was a real compromise
> 3) I carried several pieces of #22 PVC wire so I could put up
> whatever would fit the site
> 4) The EZNEC models for the antenna, done later, were medicocre,
> several db worse than a dipole on all four bands - but they don't
> include the sloping ground
> 5) Even though the antenna was low, it radiated well from the high
> mountain with the deep valley below.
> 6) By using a series resistor with my 3-cell lithium battery, and
> with an absorbtive bridge in my tuner, I was able to tune reactive
> matches without tripping the ATS-3B overcurrent detector.
> 8) I operated for over 3 hours, including 1 hour of ragchewing, at
5W
> output, and the lithium battery dropped from 12.6V to 11.75V.
> 9) The ATS-3B worked perfectly
> 10) All the radio stuff weighed 3 lb 5 oz. Over 1 lb of this is
the
> pack I use for an organizer. Room for improvement!
> 11) Compromise is the key to successful portable operation
>
> Sorry I couldn't do more ragchewing, but the NA Contest dominated
20,
> 40, and 80M.
>
> 72/73
> Carey Fuller
> KX0R
>
> > All,
> >
> > KX0R may be on the air this weekend from an alpine site at
11,700'
> in
> > the Colorado mountains. It's "maybe" because of uncertainties
> > related to weather and whether our group actually reaches the hut.
> >
> > My antenna will be modest at best, but the site is awesome, on
the
> > side of a high mountain near the Divide, right at treeline. If I
> get
> > on, I plan to be near 7.045, 10.120, 14.065 - depending on the
> > contest and what's available. I may jump into the contest also.
> >

> > Most likely time to find me will be on 40M, around 9 PM MST
> Saturday
> > night (0400 UT Sunday), or later. Saturday afternoon is another
> > possibility - between 2 and 5 PM MST, or 2100-2400 UT Saturday.
> > Unfortunately I can't be more specific, being part of a group of
> > folks, and subject to many of Murphy's laws.
> >
> > No promises here - just maybe. I know the rig will work if I can
> get
> > an antenna up and have no other problems....
> >
> > I will use my name George for CW -
> > 72,
> >
> > George Carey Fuller
> > KX0R
> >
>

2661. Re: Yet another portable key invention - The "UD" key - hand held iambic key

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-18 02:12:10 UTC
From: mantermeadows
Topic: 2653 Message: 2661

I've flown with mine and had no problem.

--- In AT_Sprint@yahoogroups.com, "Bill" <bgriffin@...> wrote:
>
>
> Gary,
>
> It passes my test for cool too,
>
> I ask myself, "would I be allowed to take this on the airplane?".
>
> Prolly not.
>
> Bill, ni5x.
>

2663. Re: [AT_Sprint] Re: KX0R Portable Operation

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-18 03:58:33 UTC
From: Fred Maas
Topic: 2635 Message: 2663
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2664. Re: KX0R Portable Operation

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-18 05:17:27 UTC
From: radio_kx0r
Topic: 2635 Message: 2664

--- In AT_Sprint@yahoogroups.com, "Fred Maas" <just.one.hill@...>
wrote:

Fred,

Sangree's Hut is one of the Tenth Mountain Huts. "Hut" is too small
a word for this nice backcountry lodge.

It's about 5 miles NW of Mosquito Pass, and we could look up along
the summit of the Mosquito Range from the hut. The hut is about a
mile south of Buckeye Peak, just below treeline.

You can read more about this hut and others here:

http://www.huts.org/hut_details/belvedere_hut_details.html

The ATS rigs are perfect for this kind of trip, where weight is so
important.

73,
Carey
KX0R

>
> Nice work, Carey! Just where is that QTH from Leadville? I have
run
> Mosquito Pass, is it in that area???
>
> 73,
>
> Fred - kt5x
>
>
> On Jan 17, 2008 5:27 PM, radio_kx0r <careyfuller@...> wrote:
>
> > --- In AT_Sprint@yahoogroups.com <AT_Sprint%40yahoogroups.com>,
> > "radio_kx0r" <careyfuller@>
> > wrote:
> > >
> > KX0R was on the air from the Sangree Froelicher hut last weekend.
> > Our group skiied and snowshoed the 3 miles and 1500 vertical feet
to
> > the hut at 11,700 feet, located a few miles from Leadville, CO.
> > >
> > I used a piece of split firewood to throw a string into a tree -
this
> > supported a compromise antenna best described as "85 feet out the

> > front of the hut and 33 feet out the back". Most of the antenna
was
> > 15 feet above the snow, and the highest point was the far end at
20
> > ft. It could be considered an off-center-fed dipole. The hut is on
> > a 30-degree slope, which probably favored signals to the east.
> >
> > With 3-4 feet of powder snow everywhere, I had to wear snowshoes
to
> > get the antenna up and down.
> >
> > I used a modified ALT. I worked several NA Contest stations on
20M,
> > including PJ5NA, before moving to 30M to ragchew. 30M was nice
just
> > before sunset, and I had a good long chat with WE0Q at Dent, MN.
> > Also worked N6VOH in CA, on the wrong side of the mountain, before
> > the band went long.
> >
> > After supper I got on 40M - worked more than 20 NA Contest
stations
> > in just over an hour, including WH6R (wrong side of the mountain)
and
> > VP9/K7AR.
> >
> > Before turning in, I decided to see if I could match 80M.
Amazingly,
> > I loaded up with no problem, and quickly worked 8 contest
stations,
> > including W1TO in MA, N3QE in MD, and K4GMH in VA. 80 was so nice
I
> > wished I'd tried it earlier, before getting sleepy.
> >
> > Key points:
> >
> > 1) No feedline was used
> > 2) Antenna was a real compromise
> > 3) I carried several pieces of #22 PVC wire so I could put up
> > whatever would fit the site
> > 4) The EZNEC models for the antenna, done later, were medicocre,
> > several db worse than a dipole on all four bands - but they don't
> > include the sloping ground
> > 5) Even though the antenna was low, it radiated well from the high
> > mountain with the deep valley below.
> > 6) By using a series resistor with my 3-cell lithium battery, and
> > with an absorbtive bridge in my tuner, I was able to tune reactive
> > matches without tripping the ATS-3B overcurrent detector.
> > 8) I operated for over 3 hours, including 1 hour of ragchewing,
at 5W
> > output, and the lithium battery dropped from 12.6V to 11.75V.

> > 9) The ATS-3B worked perfectly
> > 10) All the radio stuff weighed 3 lb 5 oz. Over 1 lb of this is
the
> > pack I use for an organizer. Room for improvement!
> > 11) Compromise is the key to successful portable operation
> >
> > Sorry I couldn't do more ragchewing, but the NA Contest dominated
20,
> > 40, and 80M.
> >
> > 72/73
> > Carey Fuller
> > KX0R
> >
> > > All,
> > >
> > > KX0R may be on the air this weekend from an alpine site at
11,700'
> > in
> > > the Colorado mountains. It's "maybe" because of uncertainties
> > > related to weather and whether our group actually reaches the
hut.
> > >
> > > My antenna will be modest at best, but the site is awesome, on
the
> > > side of a high mountain near the Divide, right at treeline. If I
> > get
> > > on, I plan to be near 7.045, 10.120, 14.065 - depending on the
> > > contest and what's available. I may jump into the contest also.
> > >
> > > Most likely time to find me will be on 40M, around 9 PM MST
> > Saturday
> > > night (0400 UT Sunday), or later. Saturday afternoon is another
> > > possibility - between 2 and 5 PM MST, or 2100-2400 UT Saturday.
> > > Unfortunately I can't be more specific, being part of a group of
> > > folks, and subject to many of Murphy's laws.
> > >
> > > No promises here - just maybe. I know the rig will work if I can
> > get
> > > an antenna up and have no other problems....
> > >
> > > I will use my name George for CW -
> > > 72,
> > >
> > > George Carey Fuller
> > > KX0R
> > >
> >
> >
> >

>

2665. Re: Trouble with new ATS-3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-18 21:47:31 UTC
From: David Packard
Topic: 2454 Message: 2665

>Lets hope you didn't crack a capacitor, which is definately possible if you
>flex the board too much!

>I discovered that the receiver had gone
>deaf. It turned out that one of the caps had cracked under
>pressure.

Thanks for the cautionary notes, but I am a GENTLEman! I should have described more exactly what I meant by "move the board." With the board on the desktop and the coax end to the right and the paddle socket to the left, we slid a finger tip along the desk surface until it came in contact with the left corner of the board. Pushing a little with the finger tip was sufficient to produce rapid increases and decreases in receive sensitivity. That is probably why we began to suspect something in the region of the paddle connector. However, I have carried the radio in a small ZipLoc bag in my shirt pocket a couple of times to confer with some of my friends. I am not aware of putting pressure on the radio, but it is possible. Thanks for your interest and I will soon have reheated all of the solder connections. 72, Dave.

2666. Portable Tuner - Modified ALT

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-19 03:58:25 UTC
From: radio_kx0r
Topic: 2666 Message: 2666

I just posted a photo of my modified ALT. I started with Steve's design, looked at the SLT manual on Doug Hendricks's website, and built this. It evolved as it went.

This one will do the regular L-matches, with the caps on either end; or they can be on both ends for a limited PI network. The parts also can be configured for the two caps to be in series across the output of the L-C circuit, with the antenna connected to the tap between the caps. This provides a differential capacitor effect and is useful for fine-tuning a partial match. With the plain L-C circuit you have to hit the inductor right on the money to get a perfect match, and this gets harder on the higher frequencies, since you only have a few choices for L.

The caps are the Doug Hendricks polyvaricons, with about 210 pf total range.

I added a 16 uH inductor and a .25 uH coil to the original 5.

Additional jumpers allow extra capacitance to be added in parallel with the variables; and both or all these caps can be put in parallel across either end of the C-L or L-C. This enables some useful low-Z matches at lower frequencies. I even put in a jumper to allow use of just the 60 pf variable cap section - this could make for less-critical matches on 17 and 15 meters.

There also is a way to create several L-C-L T-networks, and these work OK for some loads.

This is a fun tuner if you like to try different antennas and frequencies. On the other hand, there are so many variables set by jumpers that the confusion factor is significant. Experience helps. It's very helpful to listen with the receiver to set up the initial configuration; then the LED bridge is used for the final match.

If you're going to use the same antenna and a couple of bands regularly, Steve's basic L-match may be all you need to stay on the air. At just over 4 ounces, including the box, leads, gator clips, and an RCA plug, my version weighs more than Steve's, so it's not really better, unless you want the options.

The best idea to come out of this is the one you don't see, because I haven't tried it yet: eliminate the tedious jumpers and use DIP switches. A unit with 7 or 8 DIP switches would control a set of inductors nicely in a logical, quick way. It would require less board space and would be more reliable - jumpers can be lost, and they break. Configurations could be set by DIP switches. They're low-cost, weigh

very little, and work nicely on perf board.

A nice C-L-C T-match could be built using the DIP switch idea for making the variable "L". I may try one of these next.

The flat "knobs" for the polyvaricons are made from red plastic, cut with a small saw and filed smooth. I drilled a center hole for a tight fit onto the cap shaft and added some epoxy to secure the "knobs". Make sure no glue gets into the capacitor.

Hopefully some of you will start with these ideas and come up with better tuners. A good tuner will let your ATS rig do its stuff in the field.

I say this, even though I think the BLT is the greatest thing since the 807...

72,

Carey Fuller
KX0R

2667. Re: [AT_Sprint] Portable Tuner - Modified ALT

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-19 16:39:13 UTC
From: Steven Weber
Topic: 2666 Message: 2667

>The best idea to come out of this is the one you don't see, because I
>haven't tried it yet: eliminate the tedious jumpers and use DIP
>switches.

I've been reluctant to try DIP switches as thier contacts are rated for
only 10 ma.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2668. Re: [AT_Sprint] Portable Tuner - Modified ALT

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-19 16:44:43 UTC
From: John A. Evans - N0HJ
Topic: 2666 Message: 2668

Steve, N0TU, and I had thought about this issue as well but we may try DIP switches mounted in sockets - that way if we fry the switch it would be easy to replace. I am also looking for tiny pushbutton switches to use as well - I found one in an old toy my daughter had and it seems suitable for using in the bridge circuit (DPDT).

72 - john - n0hj

Steven Weber wrote:
>
> I've been reluctant to try DIP switches as thier contacts are rated for
> only 10 ma.
> 72,
> Steve, KD1JV
>

2669. Re: Portable Tuner - Modified ALT

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-19 18:41:58 UTC
From: radio_kx0r
Topic: 2666 Message: 2669

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:

Steve,

I got the DIP switch idea because I have a nice sample kit from Grayhill. A salesman gave me this stuff years ago. Grayhill's switches are generally well-engineered, with full specs, but not the cheapest.

I just went into the Grayhill online catalog and found that the type 76 & 78 DIP switches I'm looking at here are rated for various SWITCHING currents of up to 150 mA at 30V for 2000 operations per switch.

However, the CARRY current is 5A with a rise of 20 degrees C.

Normally with our tuners we don't need to operate the switches with RF applied. I think 5A of carry current is enough for 5W, allowing for weird impedances, circulating current, etc. CW operating is usually intermittent duty. The 2000 operations seems to be based on switching live circuits - we might get more life in a tuner.

Here's the link to the catalog:

http://lgrws01.grayhill.com/web/images/ProductImages/Dip_Group.pdf

The specs for the 76 and 78 series are down on Page 14. Note also the materials: these switches all use a spring-loaded shorting ball. Ball and contacts are gold plated, etc.

Contact resistance is initially less than or equal to 30 mohm and it rises to 100 mohms at end of life. Eventually the gold plating wears away.

I don't think anyone is going to burn these DIP switches out with 5W, although some might eventually wear them out.

Now that I see the specs I'm getting more interested in building a DIP tuner.

I also have some type 79 linear action switches - these are like sliders, and would work to make a simple, compact variable inductor. They're on page 15 of the catalog - real tempting. Others have used rotary switches to do the same thing. The 79 units have a higher spec resistance than the DIP switches.

I haven't looked at other manufacturers' specs, because I've got this box of Grayhill stuff staring at me. It's likely some of the other

guys have specs similar to Grayhill.

I don't think the current rating of the DIP switches will be a
problem with quality parts, and they sure would be easier to adjust
than those jumpers.

Whether the losses are a problem can be determined by testing a tuner.
Whether to build a T-network or another L is the question. I really
want to modify the one I just built, but I don't think it's practical.

I'm optimistic about this idea.

72,

Carey Fuller
KX0R

> >The best idea to come out of this is the one you don't see,
because I
> >haven't tried it yet: eliminate the tedious jumpers and use DIP
> >switches.
>
> I've been reluctant to try DIP switches as thier contacts are rated
for
> only 10 ma.
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com
>

2670. Re: Portable Tuner - Modified ALT

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-19 19:29:30 UTC
From: radio_kx0r
Topic: 2666 Message: 2670

--- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@...>
wrote:

More DIP switch info:

The Grayhill DIP switch design must be pretty good. My samples are
25 years old. Digikey sells the same part numbers now.

A good starting point is Grayhill 78B08T, Digikey GH7193-ND. This
has the extended actuators. It has 8 independent SPST switches.

That one costs $1.02 for one, less in quantity, and they have plenty
of stock.

The 76SB06 is another good one: rocker style, 6 switches.

Many other configurations are available. Digikey seems to have stock
of most of the common varieties. You only need the seals ("S" in
part number) if you're going to immerse them in solvents.

For some reason the 76 series rated at 5A carry current, but the 78
series is rated at 4A, according to Grayhill's specs in THEIR catalog.

The surface mount DIP switches seem to have higher contact
resistance - no reason to go there.

Nice to know that some of the good DIP parts aren't gone yet.

72,
Carey
KX0R

> --- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@> wrote:
>
> Steve,
>
> I got the DIP switch idea because I have a nice sample kit from
> Grayhill. A salesman gave me this stuff years ago. Grayhill's
> switches are generally well-engineered, with full specs, but not
the
> cheapest.
>
> I just went into the Grayhill online catalog and found that the
type
> 76 & 78 DIP switches I'm looking at here are rated for various
> SWITCHING currents of up to 150 mA at 30V for 2000 operations per
> switch.
>

> However, the CARRY current is 5A with a rise of 20 degrees C.
>
> Normally with our tuners we don't need to operate the switches with
> RF applied. I think 5A of carry current is enough for 5W, allowing
> for weird impedances, circulating current, etc. CW operating is
> usually intermittent duty. The 2000 operations seems to be based
on
> switching live circuits - we might get more life in a tuner.
>
> Here's the link to the catalog:
>
> http://lgrws01.grayhill.com/web/images/ProductImages/Dip_Group.pdf
>
> The specs for the 76 and 78 series are down on Page 14. Note also
> the materials: these switches all use a spring-loaded shorting
ball.
> Ball and contacts are gold plated, etc.
>
> Contact resistance is initially less than or equal to 30 mohm and
it
> rises to 100 mohms at end of life. Eventually the gold plating
wears
> away.
>
> I don't think anyone is going to burn these DIP switches out with
5W,
> although some might eventually wear them out.
>
> Now that I see the specs I'm getting more interested in building a
> DIP tuner.
>
> I also have some type 79 linear action switches - these are like
> sliders, and would work to make a simple, compact variable
inductor.
> They're on page 15 of the catalog - real tempting. Others have
used
> rotary switches to do the same thing. The 79 units have a higher
> spec resistance than the DIP switches.
>
> I haven't looked at other manufacturers' specs, because I've got
this
> box of Grayhill stuff staring at me. It's likely some of the other
> guys have specs similar to Grayhill.
>
> I don't think the current rating of the DIP switches will be a
> problem with quality parts, and they sure would be easier to adjust
> than those jumpers.
>
> Whether the losses are a problem can be determined by testing a
tuner.

> Whether to build a T-network or another L is the question. I
really
> want to modify the one I just built, but I don't think it's
practical.
>
> I'm optimistic about this idea.
>
> 72,
>
> Carey Fuller
> KX0R
>
> > >The best idea to come out of this is the one you don't see,
> because I
> > >haven't tried it yet: eliminate the tedious jumpers and use DIP
> > >switches.
> >
> > I've been reluctant to try DIP switches as thier contacts are
rated
> for
> > only 10 ma.
> > 72,
> > Steve, KD1JV
> > "Melt Solder"
> > White Mountains of New Hampshire
> > http://kd1jv.qrpradio.com
> >
>

2671. Bluetooth

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-19 20:00:46 UTC
From: Steven Weber
Topic: 2609 Message: 2671

The local "Save a lot" had some $20.00 Bluetooth headsets for sale, so I bought one. Was able to get my PDA to talk to it and works with the Pocketdigi program. At least sounds comes in and out of the headset to the program.

Audio level from the headset is pretty low and the mic is very sensitive, so looks like I will have to make an interface board to attenuate the audio to the mic input and square up the headphone output to input the data to the 3B. Be kinda neat if this works and have a wireless connection between the PDA and 3B!

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2672. is this normal? adjusting band module

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-19 20:31:30 UTC
From: dave3wave
Topic: 2672 Message: 2672

Hi
I assembled today the 40m band module. So far so good. I connected an antenna. But there was no difference in the audio level. To trim ct2+3 had no effect. I emited a carrier by my normal transceiver with low power (1W) in a dummy load. I heard the carrier with the ats2b and I was able to trim ct2+3. Connect and disconnect has no effect to the audio level. I think that's not normal.....

73 David

2673. Re: Portable Tuner - Modified ALT

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-20 00:24:51 UTC
From: ve3wmb
Topic: 2666 Message: 2673

Using DIP switches is a great idea. The jumpers work fine on the stock ALT but when in the field you have to be very careful not to lose them. I always bring a few spares just in case and so far I have been lucky.

What I discovered is that the recommended 51 ft wire will also match nicely on 80m with the stock ALT (as well as 40m/20m). Thirty meters is a bit more problematic with this wire length but if you coil up a foot or two of the 51 ft length then 30m will match just fine.
I normally use either 5 X 16ft radials (made from a length of 5 conductor computer ribbon cable) or a single 32 ft wire on the ground.

BTW the ALT makes a great little companion tuner for the ATS-3 rigs, especially since the rig always sees 50 ohms while in the tuner is in the tune position and the tuner itself fits into an altoids tin, so that combined with the ATS-3 itself makes for a pretty small station.

Michael VE3WMB

--- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@...> wrote:
>
>
> The best idea to come out of this is the one you don't see, because I
> haven't tried it yet: eliminate the tedious jumpers and use DIP
> switches. A unit with 7 or 8 DIP switches would control a set of
> inductors nicely in a logical, quick way. It would require less board
> space and would be more reliable - jumpers can be lost, and they break.
> Configurations could be set by DIP switches. They're low-cost, weigh
> very little, and work nicely on perf board.
>
> A nice C-L-C T-match could be built using the DIP switch idea for
> making the variable "L". I may try one of these next.
>

2674. Run for the Bacon - tomorrow night!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-19 18:23:00 UTC
From: Larry Makoski
Topic: 2674 Message: 2674

The January Run for the Bacon is tomorrow night!

Sunday night - January 20th from:
9 - 11 PM EST
8 - 10 PM CST
7 - 9 PM MST
6 - 8 PM PST

This is a 2 hour, fun filled, friendly QRP CW contest open to ALL radio amateurs. Membership in the Flying Pigs QRP ARCI is not required. For the scoop on the details, please go to:

http://www.gentzow.com/fpqrp/fpqrprun.php

Hope to catch you on the bands!

73 de Larry W2LJ
FP# 612

--
73 de Larry W2LJ
QRP - When you care to send the very least!

http://www.w2lj.qrpradio.com
http://w2lj.blogspot.com/

2675. Re: Bluetooth

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-20 10:36:07 UTC
From: kc7fys
Topic: 2609 Message: 2675

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
>
> The local "Save a lot" had some $20.00 Bluetooth headsets for sale, so
I
> bought one.

K7AGE has a similar idea with the Jabra bluetooth interface.
http://uk.youtube.com/watch?v=6ypVUoRVv3U
Jonathan

2676. Re: Portable Tuner - Modified ALT

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-20 22:11:01 UTC
From: radio_kx0r
Topic: 2666 Message: 2676

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:

All,

I just ran 1.2A through one set of contacts on a Grayhill DIP switch. I measured about 12 mV across the switch, so the initial resistance is about 10 mohm (0.01 ohm). It didn't change after a minute or so ON. I removed the current, cycled the switch, and retested - about the same results.

I decided I'd hit the jackpot.

After some agony, I opened up my newly-built and very functional ALT. In order to fit in the DIP switch, I ripped out many of the jumper pins in the center of the perf board. These were all held by 5-minute epoxy on top, which fortunately was not as strong as the perf board.

I hate to wreck a project that I just finished and that has proved itself so well - but those little jumpers made me do it !!

There will still be a few jumpers for the basic configurations, but the inductors will be selected by the DIP switches.

Stay "tuned" !

72
KX0R
> >The best idea to come out of this is the one you don't see, because I
> >haven't tried it yet: eliminate the tedious jumpers and use DIP
> >switches.
>
> I've been reluctant to try DIP switches as thier contacts are rated for
> only 10 ma.
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com
>

2677. Run for the Bacon, 1/20/2008, 6:00 pm

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-21 01:41:17 UTC
From: AT_Sprint@yahoogroups.com
Topic: 2677 Message: 2677

Reminder from: AT_Sprint Yahoo! Group
http://groups.yahoo.com/group/AT_Sprint/cal

Run for the Bacon
Sunday January 20, 2008
6:00 pm - 8:00 pm
(This event repeats every month on the third Sunday.)
Location: Your shack or anywhere

Notes:
This Sunday evening, the Flying Pigs Amateur Radio Club International will be holding its monthly Run For The Bacon. This is a friendly, two hour QRP CW Sprint, which is open to ALL radio amateurs, will last from 9:00 - 11:00PM EDT (0200-0400 UTC Monday).

You may work stations once per band on 160, 80, 40, 20, 15 or 10 Meters. Suggested starting frequencies are 1.812, 3.562, 7.044, 14.062, 21.062, and 28.062 MHz.

The exchange is RST, S/P/C (State, Province, Country) and Flying Pigs membership number. If you're not a member of the Flying Pigs, and would like to be; then please cli

All Rights Reserved
Copyright ? 2008
Yahoo! Inc.
http://www.yahoo.com

Privacy Policy:
http://privacy.yahoo.com/privacy/us

Terms of Service:
http://docs.yahoo.com/info/terms/

2678. What are the differences between ATS-3 / 3A / 3B ?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-21 02:04:14 UTC
From: mantermeadows
Topic: 2678 Message: 2678

Has anyone put together a chart of all the features and specs of the ATS-3 series? I'm a builder/user of an ATS-3 and have been very happy with it's features and performance since early 2005. I'll have to admit to a little ignorance as to what all the other versions would give me and what I would lose. I've scanned through a couple hundred postings in this group (there's no way I'm going to read all 2600+ postings) and I'm at a loss to tally up all the differences. How's the circuit changed? What's different in the firmware? I understand that there is limited space for firmware so to add to it something else must go.

I recognize the advantage of being able to use PocketDigi with the 3B, which I would love to be able to do, so what do I have to give up? I don't want to lose my wideband receive capability as I use that feature a lot. Plus wideband would be great to have during PSK31 operation. If I could pick and choose on features within the firmware I'd probably give up CW memory.

Any thoughts?

Gary - KC8UD

2679. Re: [AT_Sprint] What are the differences between ATS-3 / 3A / 3B ?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-21 03:17:14 UTC
From: Vojtěch Bubník
Topic: 2678 Message: 2679

Hi Gary.

> I recognize the advantage of being able to use PocketDigi with the 3B,
> which I would love to be able to do, so what do I have to give up? I
> don't want to lose my wideband receive capability as I use that feature
> a lot. Plus wideband would be great to have during PSK31 operation.

You have ATS-3. It has 40MHz DDS clock.
ATS-3A has only improved RX/TX switching to handle HF broadcast strong signals better. It has the same controller as ATS-3. It has 50MHz DDS clock.
ATS-3B has microcontroller with 2x more program memory, built in digital modes capability, single digit display and better CW shaping. It has 60MHz DDS clock and higher bands.

I developed the first digital modes firmware on ATS-3a. I had to disable DFE and Iambic-B to squeeze the extensions into ATS-3A. Also the calibration functions were removed as they are needed only once. One needs to calibrate with the original firmware and then to upload the new one. You could download the firmware for A at http://pocketdigi.sourceforge.net . Steve merged my digital extensions to ATS-3B, so it is already there. As ATS-3B has more memory, none of the features need to be disabled.

In theory it shall be possible to use the modified ATS-3A on the non-A version. As I was only able to test the modified ATS-3A firmware on the -A version, I cannot be sure whether I didn't break the wideband receive function of non-A. You could test it. You need to configure the source code (enable wideband, set lower DDS clock) and recompile it.

73, Vojtech OK1IAK

2680. Re: What are the differences between ATS-3 / 3A / 3B ?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-21 05:54:32 UTC
From: radio_kx0r
Topic: 2678 Message: 2680

--- In AT_Sprint@yahoogroups.com, "mantermeadows" <beartrack1@...>
wrote:

Gary,

The manuals for the ATS-II, ATS-3, ATS-3A, and ATS-3B are all
available in the FILES section of this site. I just spent a few
interesting minutes looking at the ATS-II manual - quite a lot has
changed, but the basic concepts are all there.

The "B" has an overcurrent detector and protects itself in case of a
current overload. It adds the 17M and 15M bands in addition to the
other 4.

The "B" uses a few mA more on receive, but in transmit mode it's very
efficient on the higher frequencies, at any allowed supply voltage.
The final has a better 74AC02 driver.

Some of the control functions have been re-arranged on the 4 buttons
on the "B" compared to the "A". Additional features have been added
to the buttons, including the ability to send code.

The "A" and "B" won't receive wideband.

I can't recall seeing a chart comparing the features. Maybe someone
will make one.

Steve Weber wrote a brief, interesting history of his rig several
weeks ago - you can find it with the SEARCH features here - it
answers some of your questions. Reading all the postings isn't
practical - but searching by keywords works well on this site.

Amazing rigs!

72

Carey Fuller
KX0R

> Has anyone put together a chart of all the features and specs of
the
> ATS-3 series? I'm a builder/user of an ATS-3 and have been very
happy
> with it's features and performance since early 2005. I'll have to
admit
> to a little ignorance as to what all the other versions would give
me
> and what I would lose. I've scanned through a couple hundred

postings
> in this group (there's no way I'm going to read all 2600+ postings)
and
> I'm at a loss to tally up all the differences. How's the circuit
> changed? What's different in the firmware? I understand that there
is
> limited space for firmware so to add to it something else must go.
>
> I recognize the advantage of being able to use PocketDigi with the
3B,
> which I would love to be able to do, so what do I have to give up?
I
> don't want to lose my wideband receive capability as I use that
feature
> a lot. Plus wideband would be great to have during PSK31 operation.
If
> I could pick and choose on features within the firmware I'd
probably
> give up CW memory.
>
> Any thoughts?
>
> Gary - KC8UD
>

2681. Re: is this normal? adjusting band module

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-21 22:00:26 UTC
From: dave3wave
Topic: 2672 Message: 2681

all ok, the rig is running.

73 David

2682. Re: Tuner - DIP-Modified ALT

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-22 07:49:04 UTC
From: radio_kx0r
Topic: 2666 Message: 2682

--- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@...>
wrote:

My DIP-switch-tuned ALT exists. I managed to rework my ALT without
hurting it. The DIP switches seem a huge improvement over the former
jumpers. The tuning is much more intuitive, particularly if you're
comfortable with binary numbers.

I have 8 DIP switches. 7 are used for inductance (they replace the
shorting jumpers), permitting 0.25 uH up to almost 32 uH, with 7-bit
precision (1 part in 128); and the eighth switch is used to add 220
pf of capacitance to the output capacitor.

There are still a few jumpers used to set up several alternate
configurations and to add even more extra capacitance. If I rebuilt
this alt, I'd have one set of DIP switches for L and one for C.

With enough extra C you can easily match low-impedance loads.

I'll upload the photos now.

I've played with it on the MFJ-259B enough - tomorrow it goes on the
rig for a 5-watt test. It's still possible that with some loads it
could fail...maybe voltage will kill the DIPs, not current?

Looks promising tonight...

72,
Carey
KX0R

>
> --- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@> wrote:
>
> All,
>
> I just ran 1.2A through one set of contacts on a Grayhill DIP
> switch. I measured about 12 mV across the switch, so the initial
> resistance is about 10 mohm (0.01 ohm). It didn't change after a
> minute or so ON. I removed the current, cycled the switch, and
> retested - about the same results.
>
> I decided I'd hit the jackpot.
>
> After some agony, I opened up my newly-built and very functional
> ALT. In order to fit in the DIP switch, I ripped out many of the
> jumper pins in the center of the perf board. These were all held

by
> 5-minute epoxy on top, which fortunately was not as strong as the
> perf board.
>
> I hate to wreck a project that I just finished and that has proved
> itself so well - but those little jumpers made me do it !!
>
> There will still be a few jumpers for the basic configurations, but
> the inductors will be selected by the DIP switches.
>
> Stay "tuned" !
>
> 72
> KX0R
> > >The best idea to come out of this is the one you don't see,
> because I
> > >haven't tried it yet: eliminate the tedious jumpers and use DIP
> > >switches.
> >
> > I've been reluctant to try DIP switches as thier contacts are
rated
> for
> > only 10 ma.
> > 72,
> > Steve, KD1JV
> > "Melt Solder"
> > White Mountains of New Hampshire
> > http://kd1jv.qrpradio.com
> >
>

2683. Re: [AT_Sprint] Re: Tuner - DIP-Modified ALT

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-22 11:47:22 UTC
From: WA0ITP
Topic: 2666 Message: 2683

Outstanding Carey!

Back to the bench,
Winter's too valuable to waste.
72, 73 Terry, WAØITP

----- Original Message -----
From: radio_kx0r
To: AT_Sprint@yahoogroups.com
Sent: Tuesday, January 22, 2008 1:49 AM
Subject: [AT_Sprint] Re: Tuner - DIP-Modified ALT

--- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@...>
wrote:

My DIP-switch-tuned ALT exists. I managed to rework my ALT without
hurting it. The DIP switches seem a huge improvement over the former
jumpers. The tuning is much more intuitive, particularly if you're
comfortable with binary numbers.

I have 8 DIP switches. 7 are used for inductance (they replace the
shorting jumpers), permitting 0.25 uH up to almost 32 uH, with 7-bit
precision (1 part in 128); and the eighth switch is used to add 220
pf of capacitance to the output capacitor.

There are still a few jumpers used to set up several alternate
configurations and to add even more extra capacitance. If I rebuilt
this alt, I'd have one set of DIP switches for L and one for C.

With enough extra C you can easily match low-impedance loads.

I'll upload the photos now.

I've played with it on the MFJ-259B enough - tomorrow it goes on the
rig for a 5-watt test. It's still possible that with some loads it
could fail...maybe voltage will kill the DIPs, not current?

Looks promising tonight...

72,
Carey
KX0R

>
> --- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@> wrote:
>
> All,

>
> I just ran 1.2A through one set of contacts on a Grayhill DIP
> switch. I measured about 12 mV across the switch, so the initial
> resistance is about 10 mohm (0.01 ohm). It didn't change after a
> minute or so ON. I removed the current, cycled the switch, and
> retested - about the same results.
>
> I decided I'd hit the jackpot.
>
> After some agony, I opened up my newly-built and very functional
> ALT. In order to fit in the DIP switch, I ripped out many of the
> jumper pins in the center of the perf board. These were all held
by
> 5-minute epoxy on top, which fortunately was not as strong as the
> perf board.
>
> I hate to wreck a project that I just finished and that has proved
> itself so well - but those little jumpers made me do it !!
>
> There will still be a few jumpers for the basic configurations, but
> the inductors will be selected by the DIP switches.
>
> Stay "tuned" !
>
> 72
> KX0R
> > >The best idea to come out of this is the one you don't see,
> because I
> > >haven't tried it yet: eliminate the tedious jumpers and use DIP
> > >switches.
> >
> > I've been reluctant to try DIP switches as thier contacts are
rated
> for
> > only 10 ma.
> > 72,
> > Steve, KD1JV
> > "Melt Solder"
> > White Mountains of New Hampshire
> > http://kd1jv.qrpradio.com
> >
>

No virus found in this incoming message.
Checked by AVG Free Edition.
Version: 7.5.516 / Virus Database: 269.19.8/1236 - Release Date: 1/21/2008 8:23 PM

2684. Re: Tuner - DIP-Modified ALT

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-22 17:16:56 UTC
From: radio_kx0r
Topic: 2666 Message: 2684

--- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@...>
wrote:

The DIP-ALT handled 5W with a match to a 5K resistor. This match
should deliver about 158V RMS to the 5K load, and it causes the
voltage across the components of the L-network to rise to similar
levels.

There were no problems. I tested matches on 80, 40, and 20M at 5W.
I ran all of them while sending dashes for 30 seconds or longer.
This was long enough to warm up the load. The inductors don't get
warm - not enough heat to feel - certainly losses are low. The
polyvaricon handled this OK.

The Grayhill DIP switches are rated to withstand 750V RMS initially,
and 500V RMS at end-of-life; this is both switch-to-switch and across
the open contacts. I think this is OK for any reasonable antenna
we're likely to use.

Of course, you could probably fry any little tuner if you try to load
a coathanger on 80M, or lose your load, for example.

72,

KX0R
Carey Fuller

>
> --- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@>
> wrote:
>
> My DIP-switch-tuned ALT exists. I managed to rework my ALT without
> hurting it. The DIP switches seem a huge improvement over the
former
> jumpers. The tuning is much more intuitive, particularly if you're
> comfortable with binary numbers.
>
> I have 8 DIP switches. 7 are used for inductance (they replace the
> shorting jumpers), permitting 0.25 uH up to almost 32 uH, with 7-
bit
> precision (1 part in 128); and the eighth switch is used to add 220
> pf of capacitance to the output capacitor.
>
> There are still a few jumpers used to set up several alternate
> configurations and to add even more extra capacitance. If I
rebuilt
> this alt, I'd have one set of DIP switches for L and one for C.

>
> With enough extra C you can easily match low-impedance loads.
>
> I'll upload the photos now.
>
> I've played with it on the MFJ-259B enough - tomorrow it goes on
the
> rig for a 5-watt test. It's still possible that with some loads it
> could fail...maybe voltage will kill the DIPs, not current?
>
> Looks promising tonight...
>
> 72,
> Carey
> KX0R
>
> >
> > --- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@> wrote:
> >
> > All,
> >
> > I just ran 1.2A through one set of contacts on a Grayhill DIP
> > switch. I measured about 12 mV across the switch, so the initial
> > resistance is about 10 mohm (0.01 ohm). It didn't change after a
> > minute or so ON. I removed the current, cycled the switch, and
> > retested - about the same results.
> >
> > I decided I'd hit the jackpot.
> >
> > After some agony, I opened up my newly-built and very functional
> > ALT. In order to fit in the DIP switch, I ripped out many of the
> > jumper pins in the center of the perf board. These were all held
> by
> > 5-minute epoxy on top, which fortunately was not as strong as the
> > perf board.
> >
> > I hate to wreck a project that I just finished and that has
proved
> > itself so well - but those little jumpers made me do it !!
> >
> > There will still be a few jumpers for the basic configurations,
but
> > the inductors will be selected by the DIP switches.
> >
> > Stay "tuned" !
> >
> > 72
> > KX0R
> > > >The best idea to come out of this is the one you don't see,
> > because I

> > > >haven't tried it yet: eliminate the tedious jumpers and use
DIP
> > > >switches.
> > >
> > > I've been reluctant to try DIP switches as thier contacts are
> rated
> > for
> > > only 10 ma.
> > > 72,
> > > Steve, KD1JV
> > > "Melt Solder"
> > > White Mountains of New Hampshire
> > > http://kd1jv.qrpradio.com
> > >
> >
>

2685. RE: Drill Template problems

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-22 20:04:05 UTC
From: Gene N0MQ
Topic: 2685 Message: 2685

Not being a graphic person I am having problems getting the drill template out of the pdf file. I pull it out and try getting it to come out right in Paint. No luck. Could someone please send me a template ready to put on a altoid tin. Thanks for your help. Using Windows XP.....
72/73
Gene
N0MQ

2686. Re: [AT_Sprint] RE: Drill Template problems

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-23 04:13:25 UTC
From: Steven Weber
Topic: 2685 Message: 2686

>Not being a graphic person I am having problems getting the drill
>template out of the pdf file. I pull it out and try getting it to

Thats because your suppost to use the bit map file located on the CD as a
seperate file.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2687. Re: [AT_Sprint] RE: Drill Template problems

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-23 11:54:30 UTC
From: n0mq@sbcglobal.net
Topic: 2685 Message: 2687

Thanks Steve for the info.
73
Gene
n0mq

----- Original Message -----
From: Steven Weber
To: AT_Sprint@yahoogroups.com
Sent: Tuesday, January 22, 2008 10:13 PM
Subject: Re: [AT_Sprint] RE: Drill Template problems

>Not being a graphic person I am having problems getting the drill
>template out of the pdf file. I pull it out and try getting it to

Thats because your suppost to use the bit map file located on the CD as a
seperate file.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2688. Palstar ZM30 vs. Micro908

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-25 06:45:30 UTC
From: kc7fys
Topic: 2688 Message: 2688

Hello ATS guys,
Off-list, could I get a reply or two... are these two Antenna Analyzers one and the same, but one is kit and the other is built/tested? A fella over on eham says this, and maybe it's common knowledge. I'm in the mood for something a bit more robust than my venerable Tenna Dipper, and those colorful Excel spreadsheet plots on antennae sure look cute. The MFJ gets mixed reviews, but generally quite good. Anyway, is the AmQRP and the Palstar the same beast? Off-list would probably be appropriate, unless you guys don't mind listening in.
73 Jonathan KC7FYS

2689. ATS-3B with HF packer amp.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-26 21:41:44 UTC
From: Mike Marcoe
Topic: 2689 Message: 2689

I was just wondering if any one has tried their ATS-3B with the HF packer amp?
I set mine up with 9 volts into the ATS-3B, about 2.5 Watts out (max input for the amp) Everything worked well on 20, 30, and 40 meters, but I have had some problems with the over current protection on the ATS-3B kicking out on 15 and 17 meters.
I was just checking to see if anyone else has had a similar problem or if I need to look at my amps input.
I have made 3 contacts so far with the rig barefoot, and have shown it off to anyone who cared to look (and some who didn't). What a great little rig and kit.

Mike, WB9OQB

2690. FYBO 2008

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-30 14:34:06 UTC
From: scott mcmullen
Topic: 2690 Message: 2690

This Saturday is the Arizona Scqrpions FYBO Field Day,
a QRP contest. Should be a fun event to take out a
AT Sprint and have some outdoor fun.

Here is the url with the rules:

http://www.azscqrpions.org/FYBO2008.htm

along with photos and results from last
year at:

http://www.azscqrpions.org/FYBO_2007_Results.htm

Hope to hear you join in the fun!

73
Scott
W5ESE

2691. 3rd kit run?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-30 19:19:08 UTC
From: ksaves2@sbcglobal.net
Topic: 2691 Message: 2691

Hey,

For the benefit of those interested, anyone heard any news if and when a third kit run of the 3b might materialize? Am still trying to get a block of time to get mine done from the 1st run but I expect there are a few who would really like to get one.

Kurt KC9LDH

2692. FYBO with ATS rig.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-30 20:13:43 UTC
From: n0tu/Steve
Topic: 2692 Message: 2692

Gang, Myself along with Rooster and Peanut are heading out for FYBO
this Friday!

We'll snow camp Friday night so we can get an early start for that
good chilly multiplier. We'll be on Friday PM of course testing out
antennas making sure all is ready for FYBO. Hope to catch you for a
freezing Q!

FYI- The 'boys" and I did a practice run this last Sunday by
activating the Polar Bear Club call sign " KB3QES" (soon to be W3PBC)
during a very WINDY day hike. You can read about it in the Pack Ice
Newsletter: http://www.polarbearqrp.org/PackIceNews.html
or here's a few pics from Sunday's Polar Bear hike:
http://picasaweb.google.com/n0tu.qrp/KB3QES/photo#s5160355678909047490
Also a video but it's little OT and not much QRP related:
http://youtube.com/goathiker

Don't miss the FUN this Saturday in the Arizona Scqrpions FYBO Field Day!

Here is the url with the rules:
http://www.azscqrpions.org/FYBO2008.htm

photos and results from last year at:
http://www.azscqrpions.org/FYBO_2007_Results.htm

Hope to hear you on! 73, Steve/n0tu/R&P
http://www.angelfire.com/planet/goatman/

2693. Re: [AT_Sprint] 3rd kit run?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-30 21:35:47 UTC
From: Steven Weber
Topic: 2691 Message: 2693

> For the benefit of those interested, anyone heard any news if and
>when a third kit run of the 3b might materialize?

I will have enough parts to make a limited number of kits (23) in a week or so. I have a list of 25 or so guys who want one, so I need to contact these people first to see how many still do.

The reason for only 23 is that is how many 3.5 volt regulators I have. The rest are back ordered until the end of Febuary, and by the time I get them it will be well into or past the first week of March. The second week of March I am leaving for the AT and will not be back until the end of May or early June. (Hopefully - the mind is willing but will the body stand up to a 900 mile walk in the woods?)
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2694. Re: [AT_Sprint] 3rd kit run?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-30 22:17:26 UTC
From: Kurt Savegnago
Topic: 2691 Message: 2694

--- Steven Weber <kd1jv@...> wrote:

> > For the benefit of those interested, anyone heard
> any news if and
> >when a third kit run of the 3b might materialize?
>
> I will have enough parts to make a limited number of
> kits (23) in a week or
> so. I have a list of 25 or so guys who want one, so
> I need to contact these
> people first to see how many still do.
>
> The reason for only 23 is that is how many 3.5 volt
> regulators I have. The
> rest are back ordered until the end of Febuary, and
> by the time I get them
> it will be well into or past the first week of
> March. The second week of
> March I am leaving for the AT and will not be back
> until the end of May or
> early June. (Hopefully - the mind is willing but
> will the body stand up to
> a 900 mile walk in the woods?)
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com

Hi Steve,

I'm sure folks appreciate the notice. Sounds like
a pretty good cardiac stress test you shoot'in for.
Is it tougher to do as one gets older? :-)

Kurt Savegnago KC9LDH

2695. RE: [AT_Sprint] FYBO with ATS rig.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-31 01:31:30 UTC
From: Ken Lotts
Topic: 2692 Message: 2695

Cool Vid at the end. Super Great slide show.
I like that antenna!

Ken aa7jc

-----Original Message-----
From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com]On
Behalf Of n0tu/Steve
Sent: Wednesday, January 30, 2008 1:14 PM
To: AT_Sprint@yahoogroups.com
Subject: [AT_Sprint] FYBO with ATS rig.

Gang, Myself along with Rooster and Peanut are heading out for FYBO
this Friday!

We'll snow camp Friday night so we can get an early start for that
good chilly multiplier. We'll be on Friday PM of course testing out
antennas making sure all is ready for FYBO. Hope to catch you for a
freezing Q!

FYI- The 'boys" and I did a practice run this last Sunday by
activating the Polar Bear Club call sign " KB3QES" (soon to be W3PBC)
during a very WINDY day hike. You can read about it in the Pack Ice
Newsletter: http://www.polarbearqrp.org/PackIceNews.html
or here's a few pics from Sunday's Polar Bear hike:
http://picasaweb.google.com/n0tu.qrp/KB3QES/photo#s5160355678909047490
Also a video but it's little OT and not much QRP related:
http://youtube.com/goathiker

Don't miss the FUN this Saturday in the Arizona Scqrpions FYBO Field Day!

Here is the url with the rules:
http://www.azscqrpions.org/FYBO2008.htm

photos and results from last year at:
http://www.azscqrpions.org/FYBO_2007_Results.htm

Hope to hear you on! 73, Steve/n0tu/R&P
http://www.angelfire.com/planet/goatman/

2696. VE3DNL Marker Generator

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-31 02:02:32 UTC
From: kc7fys
Topic: 2696 Message: 2696

Howdy there. I'm scratching my head here, because I just may have failed at the World's Most Fail-proof QRP kit. This NorCal marker generator--am I using it right? Tuned my Kenwood rig to 3.900.000, applied fresh 9V battery, tiny 'antenna' of hookup wire in "5K" connection. I assume I should be hearing an audio tone either at 3.9Mhz or 1600AM as I read in the manual. Nothing. Bupkis! Very oddly, however, at 1600AM on the boombox here at work, I hear a buzzing with the marker generator within a foot of the receiver--powered or not powered (9V alkaline battery)--but this buzzing is stopped by touching pin 7 of the MC14060. That's with power or without--which I find odd. Could I have zapped the IC and destroyed it with static?
Jonathan

2697. Re: FYBO with ATS rig.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-31 04:19:20 UTC
From: Roland Whitsitt
Topic: 2692 Message: 2697

Hey Steve, That was pretty cool video of you hiking with your two goats. I had no idea that you could do something like that with goats. Dogs, maybe. Cats never. But goats? Who knew?
73s de N5VWN
Roland
--- In AT_Sprint@yahoogroups.com, "n0tu/Steve" <n0tu.qrp@...> wrote:
>
> Gang, Myself along with Rooster and Peanut are heading out for FYBO
> this Friday!
>
> We'll snow camp Friday night so we can get an early start for that
> good chilly multiplier. We'll be on Friday PM of course testing out
> antennas making sure all is ready for FYBO. Hope to catch you for a
> freezing Q!
>
> FYI- The 'boys" and I did a practice run this last Sunday by
> activating the Polar Bear Club call sign " KB3QES" (soon to be W3PBC)
> during a very WINDY day hike. You can read about it in the Pack Ice
> Newsletter: http://www.polarbearqrp.org/PackIceNews.html
> or here's a few pics from Sunday's Polar Bear hike:
> http://picasaweb.google.com/n0tu.qrp/KB3QES/photo#s5160355678909047490
> Also a video but it's little OT and not much QRP related:
> http://youtube.com/goathiker
>
> Don't miss the FUN this Saturday in the Arizona Scqrpions FYBO Field Day!
>
> Here is the url with the rules:
> http://www.azscqrpions.org/FYBO2008.htm
>
> photos and results from last year at:
> http://www.azscqrpions.org/FYBO_2007_Results.htm
>
> Hope to hear you on! 73, Steve/n0tu/R&P
> http://www.angelfire.com/planet/goatman/
>

2698. Re: 3rd kit run?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-31 04:24:00 UTC
From: Roland Whitsitt
Topic: 2691 Message: 2698

Steve. I hope that when you do your hike, You will keep us informed like last time. That was fun following you through the trail. Let us know if you plan to do some operating. I'm sure more than a few of us will be listening!
best 73's de N5VWN
Roland in Californy

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
>
> > For the benefit of those interested, anyone heard any news if and
> >when a third kit run of the 3b might materialize?
>
> I will have enough parts to make a limited number of kits (23) in a week or
> so. I have a list of 25 or so guys who want one, so I need to contact these
> people first to see how many still do.
>
> The reason for only 23 is that is how many 3.5 volt regulators I have. The
> rest are back ordered until the end of Febuary, and by the time I get them
> it will be well into or past the first week of March. The second week of
> March I am leaving for the AT and will not be back until the end of May or
> early June. (Hopefully - the mind is willing but will the body stand up to
> a 900 mile walk in the woods?)
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com
>

2699. RE: [AT_Sprint] Re: 3rd kit run?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-31 04:33:43 UTC
From: Dale Putnam
Topic: 2691 Message: 2699

Hi Steve, and all,
I think it would be a blast to build the new 3B, then use it on its first Q to talk to its designer, while on the AT. Now that might take a bit of planning.. and all, but what a blast. I want to try it. --... ...--Dale - WC7S in Wy

To: AT_Sprint@yahoogroups.comFrom: n5vwn@sbcglobal.netDate: Thu, 31 Jan 2008 04:24:00 +0000Subject: [AT_Sprint] Re: 3rd kit run?

Steve. I hope that when you do your hike, You will keep us informed like last time. That was fun following you through the trail. Let us know if you plan to do some operating. I'm sure more than a few of us will be listening!best 73's de N5VWNRoland in Californy--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:>> > For the benefit of those interested, anyone heard any news if and> >when a third kit run of the 3b might materialize? > > I will have enough parts to make a limited number of kits (23) in a week or> so. I have a list of 25 or so guys who want one, so I need to contact these> people first to see how many still do. > > The reason for only 23 is that is how many 3.5 volt regulators I have. The> rest are back ordered until the end of Febuary, and by the time I get them> it will be well into or past the first week of March. The second week of> March I am leaving for the AT and will not be back until the end of May or> early June. (Hopefully - the mind is willing but will the body stand up to> a 900 mile walk in the woods?) > 72,> Steve, KD1JV> "Melt Solder"> White Mountains of New Hampshire> http://kd1jv.qrpradio.com>

_____
Connect and share in new ways with Windows Live.
http://www.windowslive.com/share.html?ocid=TXT_TAGHM_Wave2_sharelife_012008

2700. Re: [AT_Sprint] Re: FYBO with ATS rig.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-31 16:15:55 UTC
From: n0tu/Steve
Topic: 2692 Message: 2700
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2701. Re: [AT_Sprint] FYBO with ATS rig.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-01-31 16:18:34 UTC
From: n0tu/Steve
Topic: 2692 Message: 2701
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2702. Ats3b: C41

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-01 00:14:17 UTC
From: gi0xac
Topic: 2702 Message: 2702

I started to build the ATS3B (2nd run) last week.
Some of you guys may already have pointed this out but while cross-checking my work I noticed that the value of C41 on the circuit diagram (schematic) on page 29 of the manual is given as 0.1uF while on page 17 it forms part of the 3 yellow 1000p (0.001uf) pack which I received. I presume that C41 is actually 0.001uf and not 0.1uf.

C16 is also not marked as such but its location is depicted in red next to C15 on page 17.

Alan GI0XAC

2703. Re: [AT_Sprint] Ats3b: C41

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-01 00:50:39 UTC
From: mbhayden
Topic: 2702 Message: 2703
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2704. Re: Ats3b: C41

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-01 09:39:08 UTC
From: gi0xac
Topic: 2702 Message: 2704

--- In AT_Sprint@yahoogroups.com, mbhayden <mbhayden@...> wrote:
>
> alan, i concluded the same as you. my 2nd run 3b works great.
>
> mike - ak3f

T
Many thanks for the confirmation, mike. Means I'm on the right track!
Alan

2705. Question about 30 Meter Filter Board component C3F...is it 47p or 470p?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-01 13:47:19 UTC
From: laseraddict777
Topic: 2705 Message: 2705

Hello, Group--

I recently got my ATS-3B on the air, thanks to Steve. In soldering up the remaining filter board for 30 meters, C3F calls for a 47 p (47) small yellow mono cap. The only remaining component I have left is the 470 p (470). This part is not used anywhere else. Should I request the specified 47 p from Steve or should the 470 p (remaining part from the kit) be used?

Thanks for your help. Rick, WB3BIQ

2706. Re: [AT_Sprint] Question about 30 Meter Filter Board component C3F...is it 47p or 470p?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-01 16:11:39 UTC
From: Michael Harnage
Topic: 2705 Message: 2706

You need a 47p for C3F. Measure it to make sure it is
470 and not 47.

-mike/w1mt

--- laseraddict777 <laseraddict777@...> wrote:

> Hello, Group--
>
> I recently got my ATS-3B on the air, thanks to
> Steve. In soldering up
> the remaining filter board for 30 meters, C3F calls
> for a 47 p (47)
> small yellow mono cap. The only remaining component
> I have left is the
> 470 p (470). This part is not used anywhere else.
> Should I request the
> specified 47 p from Steve or should the 470 p
> (remaining part from the
> kit) be used?
>
> Thanks for your help. Rick, WB3BIQ
>
>

Never miss a thing. Make Yahoo your home page.
http://www.yahoo.com/r/hs

2707. Re: [AT_Sprint] Question about 30 Meter Filter Board component C3F...is it 47p or 470p?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-01 22:14:41 UTC
From: Steven Weber
Topic: 2705 Message: 2707

>the remaining filter board for 30 meters, C3F calls for a 47 p (47)
>small yellow mono cap. The only remaining component I have left is the
>470 p (470). This part is not used anywhere else. Should I request the
>specified 47 p from Steve or should the 470 p (remaining part from the
>kit) be used?

Yeah, thats the right part. Sometimes they mark them 47 and sometimes 470.
If it were 471, that means its a 470 pfd cap.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2708. Re: Question about 30 Meter Filter Board component C3F...is it 47p or 470p?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-02 05:41:15 UTC
From: radio_kx0r
Topic: 2705 Message: 2708

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
>
> >the remaining filter board for 30 meters, C3F calls for a 47 p (47)
> >small yellow mono cap. The only remaining component I have left is
the
> >470 p (470). This part is not used anywhere else. Should I request
the
> >specified 47 p from Steve or should the 470 p (remaining part from
the
> >kit) be used?
>
> Yeah, thats the right part. Sometimes they mark them 47 and
sometimes 470.
> If it were 471, that means its a 470 pfd cap.
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com
>

Steve's right (as usual).

The C3F in my 30 meter module is marked 470, and it works real well.
You have the right cap.

There are several marking systems in use for capacitors, and most of
us have to measure some of them to decide what they really are. Part
values ending in zero, like this 470, are ambiguous, unless you know
what system the manufacturer uses.

Dipped mica caps are commonly marked both ways. 47J is 47 pf 5%, and
471 is 470 pf, but 470 could be either value - you have to measure
it.

Disc ceramic caps have similar confusing marking systems. Last year
I sorted several hundred caps into a parts cabinet, and I had to
measure many of them.

Carey
KX0R

2709. Re: Question about 30 Meter Filter Board component C3F...is it 47p or 470p?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-02 17:19:30 UTC
From: laseraddict777
Topic: 2705 Message: 2709

--- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@...> wrote:
>
> --- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@> wrote:
> >
> > >the remaining filter board for 30 meters, C3F calls for a 47 p (47)
> > >small yellow mono cap. The only remaining component I have left is
> the
> > >470 p (470). This part is not used anywhere else. Should I request
> the
> > >specified 47 p from Steve or should the 470 p (remaining part from
> the
> > >kit) be used?
> >
> > Yeah, thats the right part. Sometimes they mark them 47 and
> sometimes 470.
> > If it were 471, that means its a 470 pfd cap.
> > 72,
> > Steve, KD1JV
> > "Melt Solder"
> > White Mountains of New Hampshire
> > http://kd1jv.qrpradio.com
> >
>
> Steve's right (as usual).
>
> The C3F in my 30 meter module is marked 470, and it works real well.
> You have the right cap.
>
> There are several marking systems in use for capacitors, and most of
> us have to measure some of them to decide what they really are. Part
> values ending in zero, like this 470, are ambiguous, unless you know
> what system the manufacturer uses.
>
> Dipped mica caps are commonly marked both ways. 47J is 47 pf 5%, and
> 471 is 470 pf, but 470 could be either value - you have to measure
> it.
>
> Disc ceramic caps have similar confusing marking systems. Last year
> I sorted several hundred caps into a parts cabinet, and I had to
> measure many of them.
>
> Carey
> KX0R
>

Thanks guys, one and all, for the info. We're back on track. 72's,
Rick, W B 3 B I Q

2710. New file uploaded to AT_Sprint

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-05 12:12:03 UTC
From: AT_Sprint@yahoogroups.com
Topic: 154 Message: 2710

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the AT_Sprint
group.

File : /OK1IF/Pict0198.jpg
Uploaded by : milanstejskal <milan.stejskal@...>
Description :

You can access this file at the URL:
http://groups.yahoo.com/group/AT_Sprint/files/OK1IF/Pict0198.jpg

To learn more about file sharing for your group, please visit:
http://help.yahoo.com/l/us/yahoo/groups/original/members/web/index.htmlfiles

Regards,

milanstejskal <milan.stejskal@...>

2711. New file uploaded to AT_Sprint

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-05 12:16:02 UTC
From: AT_Sprint@yahoogroups.com
Topic: 154 Message: 2711

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the AT_Sprint
group.

File : /OK1IF/DX_Atos.wav
Uploaded by : milanstejskal <milan.stejskal@...>
Description : It is my first DX qso withs ATS-3B. Band 80m power set to 1,5 W. Ant. LW42m

You can access this file at the URL:
http://groups.yahoo.com/group/AT_Sprint/files/OK1IF/DX_Atos.wav

To learn more about file sharing for your group, please visit:
http://help.yahoo.com/l/us/yahoo/groups/original/members/web/index.htmlfiles

Regards,

milanstejskal <milan.stejskal@...>

2712. RE-Programming original ATS-3 to allow digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-07 20:37:52 UTC
From: mantermeadows
Topic: 2712 Message: 2712

Here's one I need help with. I'm very fond of my ATS-3 mostly because it will allow me to turn off the narrow band filter and have wide band receive. I understand that the 3A and 3B have lost this functionality. I would like to be able to interface my Pocket PC and have use of digital modes via PocketDigi but am hesitant to switch to a 3B. Do some of you programmers think that there is room in the ATS-3 controller memory to write the routine for digital interfacing by perhaps leaving out the calibraton routine? I don't have a grasp on how much memory is needed for the digital mode routine nor do I have the hardware and in-depth programming experience to attempt the procedure.

In other words...can the digital mode be programmed into the ATS-3 and what would I have to lose to get it to fit in? Will the clock speed of the original ATS-3 controller handle the digital modes? Can anyone out there help with compliling and programming such a routine?

Thanks.
Gary - KC8UD

2713. Re: [AT_Sprint] RE-Programming original ATS-3 to allow digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-08 18:34:26 UTC
From: Steven Weber
Topic: 2712 Message: 2713

There's not a whole lot of difference between the programs in the 3 and 3A,
so adding the digital modes should be possible. And then it would work in
the ATS-2 also. I supose it should be done, but I don't have the time to
tackle it right now. Maybe after my hiking trip this spring.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2714. Coaxial pwr plug

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-09 06:45:53 UTC
From: Tim Keene
Topic: 2714 Message: 2714

Hey Steve, or anyone that knows for sure. I have a quick question. What size is the pwr plug for the ATS-3. I need to buy a few for the rig and a few other electronic devices that use the same size plug.
Tim - K5DEZ

2715. Re: Coaxial pwr plug

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-09 06:54:31 UTC
From: Tim Keene
Topic: 2714 Message: 2715

OOOPPss...never mind. I found it in the manual right after I hit send button. .7mm

--- In AT_Sprint@yahoogroups.com, "Tim Keene" <K5DEZ@...> wrote:
>
> Hey Steve, or anyone that knows for sure. I have a quick question. What
> size is the pwr plug for the ATS-3. I need to buy a few for the rig and
> a few other electronic devices that use the same size plug.
> Tim - K5DEZ
>

2716. Re:[AT_Sprint] Re: Coaxial pwr plug

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-09 08:08:26 UTC
From: J. Haynes
Topic: 2716 Message: 2716

...which reminds me, what kinds of switches, if any have you implemented with this rig? I get frustrated plugging and unplugging that rather sticky plug. Kc7fys

2717. Re: Coaxial pwr plug

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-09 16:38:27 UTC
From: Buddy Brown
Topic: 2714 Message: 2717

By the way, in a pinch, Radio Shack sells that size plug.
Buddy

2718. Re: [AT_Sprint] RE-Programming original ATS-3 to allow digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-09 17:19:26 UTC
From: Vojtěch Bubník
Topic: 2712 Message: 2718

Hi Gerry.

> Do some
> of you programmers think that there is room in the ATS-3 controller
> memory to write the routine for digital interfacing by perhaps leaving
> out the calibraton routine?

I already answered you this question. You will need to leave out calibration, DFE and probably some of following: Tune mode, Iambic B, Test message to check connection between PocketDigi and ATS3.

You will need to download ATS-3a source from pocketdigi.sourceforge.net
Enable/disable features you could miss by commenting out some defines. For example, to disable "morse paddle by up/down buttons", you need to change line
#define HAS_STEALTH
to
; #define HAS_STEALTH
The difference is the added semicolon at the start of the line.

I would say, you need to modify following lines:

enable wideband
#define HAS_WIDEBAND

disable the connection test message to leave some place for the wideband function
; #define HAS_UART_PLAY

Enable extrnal paddle. My latest ATS-3b used touch paddle connected in parallel to up/down buttons.
; #define HAS_TUNEUP_ON_DIT
#define HAS_EXTERNAL_PADDLE
; #define HAS_STEALTH

> I don't have a grasp on how much memory is
> needed for the digital mode routine

Run the compiler and it will tell you whether the memory is full or not. If it is full, you will need to disable some other ATS3 feature.

> Will the clock speed of
> the original ATS-3 controller handle the digital modes?

There are three clocks in ATS-3 series circuit:
DDS clock
32kHz watch clock
R/C oscillator inside the microcontroller.

You don't need to change the DDS clock constant in the source code, as it is only used during calibration. You have the correct value already in flash. The other clocks are the same between all ATS-3s.

73, Vojtech OK1IAK

2719. Re: [AT_Sprint] RE-Programming original ATS-3 to allow digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-09 18:19:30 UTC
From: Vojtěch Bubník
Topic: 2712 Message: 2719

Hi Gerry,

I forgott to stress two things regarding my ATS-3a digital firmware.

I cannot guarantee that it will work for you. I may have introduce some new errors when I added keying by up/down buttons and disabled keying by external paddle. After I modified my ATS-3a hardware, I had no way to test the firmware on the original hardware. I also cannot guarantee that the wideband function will still work on your ATS-3, as I cannot test it on the hardware. You are on your own. In worst case, you will lose some time. You could always program back the original ATS-3 firmware.

I know of one problem. The straight key does not work.

73, Vojtech OK1IAK

2720. WTB: QBSA

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-10 16:56:29 UTC
From: w0rmt
Topic: 2720 Message: 2720

Greetings all-

I am new to the list, having just purchased a beautiful ATS-3a. I'd love to have a QBSA to go with it for home use. I see there is nothing about it on Steve's website any longer. Does anybody have one they'd like to sell or know where one might be available? Please contact me offf-list if you have any leads.

Thanks and 72/3 de Bud
W0RMT

2721. Simple resistor interface

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-10 23:51:53 UTC
From: Mike Marcoe
Topic: 2721 Message: 2721

I tried to upgrade the firmware on my ATS-3B using the IAR software and the simple resistor interface with no luck. I get the error message "can not find target device" and the led display on the ATS goes to "E".
So I figured I would ask those who have hade success at doing this.

1. I their a set voltage that is needed for the supply to the ATS3 when programming? I was using 9 Volts

2. When selecting the device should I use "msp430f1121a" as per W1MT's directions or should I use "msp430f1232" which is the actual chip on the board?

Thanks
Mike - WB9OQB

2722. NAQCC February Sprint - Tuesday

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-11 01:12:37 UTC
From: Larry Makoski W2LJ
Topic: 2722 Message: 2722

This coming Tuesday evening will be the monthly NAQCC Sprint for February, 2008.

I will refer you to the proper URL:

http://www.arm-tek.net/~yoel//sprint200802.html

There you will find all the details as to time, frequencies, this month's Special Award, etc.

This is a monthly event that caters to the CW veteran, the CW newcomer, straight key and bug fans. All are welcome to participate; but you must use QRP power levels to compete for awards.

Come join us and have a real good time!

73 de Larry W2LJ
NAQCC #035

2723. Re: [AT_Sprint] Simple resistor interface

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-11 01:29:40 UTC
From: Michael Harnage
Topic: 2721 Message: 2723

Mike,

For the 3B definitely use the option "msp430f1232" for
the IAR setup.

-mike

--- Mike Marcoe <michaeldotm@...> wrote:

> 2. When selecting the device should I use
> "msp430f1121a" as per W1MT's
> directions or should I use "msp430f1232" which is
> the actual chip on
> the board?
>

Looking for last minute shopping deals?
Find them fast with Yahoo! Search.
http://tools.search.yahoo.com/newsearch/category.php?category=shopping

2724. Re: Simple resistor interface

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-11 05:30:05 UTC
From: Mike Marcoe
Topic: 2721 Message: 2724

Mike,

Thanks for the information I will do that when I get my JTAG cable. I have given up on trying to get the resistor interface to work.

Mike - WB9OQB

--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:
>
> Mike,
>
> For the 3B definitely use the option "msp430f1232" for
> the IAR setup.
>
> -mike

2725. Latching Relays -- suggest make / model

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-13 02:40:23 UTC
From: eplerkeppler
Topic: 2725 Message: 2725

I thought I'd ask if anyone has a pet make/model latching relay they use and where to buy it.

My application will be a 9.6 volt battery for powering the switching coil, so anything 9.6 Volts or less for the switching power is fine. I can always put in a regulator to get down to 5 V or 3 or whatever.

The loads with be a few signal level loads then perhaps maybe one for as much as a 200 mA load at most.

I would like it to be smallish and maybe 15 dollars or less but let me know what you know about / like.

-- Charles McMurrough WC5MC

*I'm going to cross post this to a few other groups so my appologies if we are like minded and share more than one group.

2726. Re: Latching Relays -- suggest make / model

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-13 06:45:17 UTC
From: radio_kx0r
Topic: 2725 Message: 2726

--- In AT_Sprint@yahoogroups.com, "eplerkeppler" <eplerkeppler@...>
wrote:

Charles,

A good choice would be the latching relays used in the Elecraft T1
autotuner. They run on a 9V battery and work well.

Several are used in the T1 tuner. I just did a little sourcing work
for you:

The relay is made by NAIS.
The NAIS part number is AGN2104H.
The coil spec is 4.5V DC @ 22 mA.
The contacts are rated for 1A @ 30 VDC. They probably will handle
more voltage at less current also.

Digikey sells this part as 255-1857-ND.
Price is $3.70 ea in small quantity.
They have stock!

Mouser sells the same thing for $3.68.
They have stock also.

Looks like a winner to me....

72/73

Carey Fuller
KX0R
>
> I thought I'd ask if anyone has a pet make/model latching relay they
> use and where to buy it.
>
> My application will be a 9.6 volt battery for powering the switching
> coil, so anything 9.6 Volts or less for the switching power is
fine.
> I can always put in a regulator to get down to 5 V or 3 or whatever.
>
> The loads with be a few signal level loads then perhaps maybe one
for
> as much as a 200 mA load at most.
>
> I would like it to be smallish and maybe 15 dollars or less but let
me
> know what you know about / like.
>

>
> -- Charles McMurrough WC5MC
>
> *I'm going to cross post this to a few other groups so my appologies
> if we are like minded and share more than one group.
>

2727. Re: Latching Relays -- suggest make / model

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-13 06:47:14 UTC
From: radio_kx0r
Topic: 2725 Message: 2727

--- In AT_Sprint@yahoogroups.com, "eplerkeppler" <eplerkeppler@...>
wrote:

Charles,

Almost forgot - that relay is DPDT. There may be others in the
series with different contact arrangements...I gave you enough to get
you started if you need something different.

KX0R
>
> I thought I'd ask if anyone has a pet make/model latching relay they
> use and where to buy it.
>
> My application will be a 9.6 volt battery for powering the switching
> coil, so anything 9.6 Volts or less for the switching power is
fine.
> I can always put in a regulator to get down to 5 V or 3 or whatever.
>
> The loads with be a few signal level loads then perhaps maybe one
for
> as much as a 200 mA load at most.
>
> I would like it to be smallish and maybe 15 dollars or less but let
me
> know what you know about / like.
>
>
> -- Charles McMurrough WC5MC
>
> *I'm going to cross post this to a few other groups so my appologies
> if we are like minded and share more than one group.
>

2728. Re: Latching Relays -- suggest make / model

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-13 08:08:32 UTC
From: eplerkeppler
Topic: 2725 Message: 2728

Carey,

Yes thank you so much.

This looks to be just what I was looking for.

I found the spec sheet on this line of AGN (Panasonic) relays.

I'll get my amateur/non-engineer hands on some as soon as I can to
make sure I can do with them what I think/hope I can do.

Thank you for your time and excellent formatting of everything.

-- Charles WC5MC

--- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@...> wrote:
>
> --- In AT_Sprint@yahoogroups.com, "eplerkeppler" <eplerkeppler@>
> wrote:
> >
> > Charles,
> >
> > Almost forgot - that relay is DPDT. There may be others in the
> > series with different contact arrangements...I gave you enough to get
> > you started if you need something different.
> >
> > KX0R
> > >
> > > I thought I'd ask if anyone has a pet make/model latching relay they
> > > use and where to buy it.
> > >
> > > My application will be a 9.6 volt battery for powering the switching
> > > coil, so anything 9.6 Volts or less for the switching power is
> > fine.
> > > I can always put in a regulator to get down to 5 V or 3 or whatever.
> > >
> > > The loads with be a few signal level loads then perhaps maybe one
> > for
> > > as much as a 200 mA load at most.
> > >
> > > I would like it to be smallish and maybe 15 dollars or less but let
> > me
> > > know what you know about / like.
> > >
> > >
> > > -- Charles McMurrough WC5MC
> > >

> > *I'm going to cross post this to a few other groups so my appologies
> > if we are like minded and share more than one group.
> >
>

2729. ATS-3A For Sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-13 19:27:40 UTC
From: Andrew C. MacAllister
Topic: 2729 Message: 2729

Greetings AT Sprint Folks,

Ed Manuel N5EM wishes to sell his ATS-3A.

The kit is built along with one band board for 40M. The other band boards are not yet built. Ed did a great job building the kit. It looks good and works well. Ed is asking $100 via PayPal and will pay for shipping to any U.S. address. Included with the rig is a partially completed balsawood box, earbuds, the manual CD and all of the parts for the remaining band boards. If you are interested, please call Ed on the phone at 832-326-5416.

Please DO NOT send e-mail back to me! I am just passing on the info.

72 de Andy W5ACM
http://www.w5acm.net

2730. ISO: Homebrewer on CD

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-14 06:41:07 UTC
From: kc7fys
Topic: 2730 Message: 2730

Howdy,
I'm not sure if it was on the ATS list per se, but I posted somewhere that I was looking for the AmQRP Homebrewer magazines on CD that were available in years of yore, but are no longer. I got a tiny bit of flak for asking for what was perceived as an unauthorized copy. As a clarification--I'd like to know if somebody has for sale their Homebrewer (or other?) Magazine(s) on CD--the authorized, legitimate original.
Contact me off-list if you do. kc7fys at yahoo dot com
Jonathan

2731. Re: Latching Relays -- suggest make / model

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-14 19:57:43 UTC
From: Garry
Topic: 2725 Message: 2731

I bought some from this guy (Ebay) See number 120096057860.

He also has other relays, check his store and do a search for relays.
http://stores.ebay.ca/Techno-Star. Lots of stuff, quick delivery, no
complaints from this end

73

Garry/Ve7ajj

--- In AT_Sprint@yahoogroups.com, "eplerkeppler" <eplerkeppler@...>
wrote:
>
> I thought I'd ask if anyone has a pet make/model latching relay they
> use and where to buy it.
>
> My application will be a 9.6 volt battery for powering the switching
> coil, so anything 9.6 Volts or less for the switching power is
fine.
> I can always put in a regulator to get down to 5 V or 3 or whatever.
>
> The loads with be a few signal level loads then perhaps maybe one
for
> as much as a 200 mA load at most.
>
> I would like it to be smallish and maybe 15 dollars or less but let
me
> know what you know about / like.
>
>
> -- Charles McMurrough WC5MC
>
> *I'm going to cross post this to a few other groups so my appologies
> if we are like minded and share more than one group.
>

2732. Re: Latching Relays -- suggest make / model

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-16 00:04:15 UTC
From: eplerkeppler
Topic: 2725 Message: 2732

Ah yes. Thanks so much Garry.

I see them here:

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=120096057860&ru=http%3A%2F%2Fsearch.ebay.com%3A80%2Fsearch%2Fsearch.dll%3Ffrom%3DR40%26_trksid%3Dm37%26satitle%3D120096057860%26fvi%3D1

-- Charles WC5MC

--- In AT_Sprint@yahoogroups.com, "Garry" <ve7ajj@...> wrote:
>
> I bought some from this guy (Ebay) See number 120096057860.
>
>
>
> He also has other relays, check his store and do a search for relays.
> http://stores.ebay.ca/Techno-Star. Lots of stuff, quick delivery, no
> complaints from this end
>
> 73
>
>
> Garry/Ve7ajj
>
>
>
> --- In AT_Sprint@yahoogroups.com, "eplerkeppler" <eplerkeppler@>
> wrote:
> >
> > I thought I'd ask if anyone has a pet make/model latching relay they
> > use and where to buy it.
> >
> > My application will be a 9.6 volt battery for powering the switching
> > coil, so anything 9.6 Volts or less for the switching power is
> fine.
> > I can always put in a regulator to get down to 5 V or 3 or whatever.
> >
> > The loads with be a few signal level loads then perhaps maybe one
> for
> > as much as a 200 mA load at most.
> >
> > I would like it to be smallish and maybe 15 dollars or less but let
> me
> > know what you know about / like.
> >

> >
> > -- Charles McMurrough WC5MC
> >
> > *I'm going to cross post this to a few other groups so my appologies
> > if we are like minded and share more than one group.
> >
>

2733. Run For The Bacon - Sunday Night

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-16 20:05:45 UTC
From: Larry Makoski W2LJ
Topic: 2733 Message: 2733

The February Run for the Bacon is tomorrow night; and this month there is a twist.

Sunday night - February 17th from:
9 - 11 PM EST
8 - 10 PM CST
7 - 9 PM MST
6 - 8 PM PST

This is a 2 hour, fun filled, friendly QRP CW contest open to ALL radio amateurs. Membership in the Flying Pigs QRP ARCI is not required. For the scoop on the details, please go to:

http://www.gentzow.com/fpqrp/fpqrprun.php

This month, in addition to the normal certificates, there WILL BE A 1ST PLACE PRIZE !!!! I was presented with a lovely Flying Pigs wrist watch; and this will be awarded to the top finisher in tomorrow night's contest! While membership in the Flying Pigs is not required to enter the contest, it IS required if you'd like to have a shot at winning this watch.

Please use the Autolog; and have your entry posted at no later than February 23rd.

Hope to catch you on the bands; and good luck to all!

73 de Larry W2LJ
FP# 612

2734. Re: RE-Programming original ATS-3 to allow digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-17 07:11:35 UTC
From: Eric Engler
Topic: 2712 Message: 2734

--- In AT_Sprint@yahoogroups.com, Vojtìch Bubník <bubnikv@...> wrote:

> > Do some
> > of you programmers think that there is room in the ATS-3 controller
> > memory to write the routine for digital interfacing by perhaps
leaving
> > out the calibraton routine?
>
> I already answered you this question. You will need to leave out
calibration, DFE and probably some of following: Tune mode, Iambic B,
Test message to check connection between PocketDigi and ATS3.

I'm new to this forum so I apologize if this was already discussed,
but how can a CW rig handle psk31 - I thought we need an SSB rig for that?

Is there a special PC program that can bypass the need to the SSB
circuitry? That would be great!

Eric

2735. Re: [AT_Sprint] Re: RE-Programming original ATS-3 to allow digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-17 23:49:38 UTC
From: Vojtěch Bubník
Topic: 2712 Message: 2735

Hi Eric.

> I'm new to this forum so I apologize if this was already discussed,
> but how can a CW rig handle psk31 - I thought we need an SSB rig for that?

DDS used in ATS3 series allows instant changing of phase and frequency by a command word. You could very well modulate RTTY, MFSK16, Olivia modes just by sending frequency change commands to DDS. It is not that easy with PSK31/63. PSK31 has raised cosine amplitude envelope. The envelope has dual purpose: To eliminate keying clicks on phase change and to help with bit synchronization on RX side. The amplitude envelope is approximated by on/off CW keying on ATS-3a/b.

> Is there a special PC program that can bypass the need to the SSB
> circuitry? That would be great!

There is no change in HW needed for digital modes. The only SW that could work with ATS-3a/b is PocketDigi. It generates command stream, that the ATS-3b microcontroller understands and translates to CW on/off keying and DDS commands.

73, Vojtech OK1IAK

2736. Run for the Bacon, 2/17/2008, 6:00 pm

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-18 01:40:54 UTC
From: AT_Sprint@yahoogroups.com
Topic: 2736 Message: 2736

Reminder from: AT_Sprint Yahoo! Group
http://groups.yahoo.com/group/AT_Sprint/cal

Run for the Bacon
Sunday February 17, 2008
6:00 pm - 8:00 pm
(This event repeats every month on the third Sunday.)
Location: Your shack or anywhere

Notes:
This Sunday evening, the Flying Pigs Amateur Radio Club International will be holding its monthly Run For The Bacon. This is a friendly, two hour QRP CW Sprint, which is open to ALL radio amateurs, will last from 9:00 - 11:00PM EDT (0200-0400 UTC Monday).

You may work stations once per band on 160, 80, 40, 20, 15 or 10 Meters. Suggested starting frequencies are 1.812, 3.562, 7.044, 14.062, 21.062, and 28.062 MHz.

The exchange is RST, S/P/C (State, Province, Country) and Flying Pigs membership number. If you're not a member of the Flying Pigs, and would like to be; then please cli

All Rights Reserved
Copyright ? 2008
Yahoo! Inc.
http://www.yahoo.com

Privacy Policy:
http://privacy.yahoo.com/privacy/us

Terms of Service:
http://docs.yahoo.com/info/terms/

2737. Re: RE-Programming original ATS-3 to allow digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-18 03:12:17 UTC
From: Eric Engler
Topic: 2712 Message: 2737

--- In AT_Sprint@yahoogroups.com, Vojtìch Bubník <bubnikv@...> wrote:

> > Is there a special PC program that can bypass the need to the SSB
> > circuitry? That would be great!
>
> There is no change in HW needed for digital modes. The only SW that
could work with ATS-3a/b is PocketDigi.

Very interesting! Can I use that program on a laptop PC?

2738. Re: [AT_Sprint] Re: RE-Programming original ATS-3 to allow digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-18 14:00:10 UTC
From: Vojtěch Bubník
Topic: 2712 Message: 2738

> > There is no change in HW needed for digital modes. The only SW that
> could work with ATS-3a/b is PocketDigi.
>
> Very interesting! Can I use that program on a laptop PC?

Yes, you could run PocketDigi on desktop or laptop with Windows 95 and newer, on Pocket PC 2002 and newer, on Handheld PC 2000 , on Smartphone with Windows Mobile 5 and newer. Port to Handheld PC Pro is on the way.

73, Vojtech OK1IAK

2739. Re: Simple resistor interface

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-21 19:05:45 UTC
From: Mike Marcoe
Topic: 2721 Message: 2739

Problem is fixed!
I tried to update the firmware with a JTAG cable but was still having the same problems. I e-mailed W1MT to see if he could answer a few questions and while I was waiting for a response I went into the BIOS of the computer and found that my LPT1 port was set as PS/2 so I set it to ECC with auto DMA and rebooted the computer. Now it programs the rig with no problems. I am not sure why LPT1 was set to PS/2 but the IAR software sure didn't like it.
I would also like to thank Mike W1MT for his time in answering my questions.

Mike - WB9OQB

--- In AT_Sprint@...m, "Mike Marcoe" <michaeldotm@...> wrote:
>
> Mike,
>
> Thanks for the information I will do that when I get my JTAG cable. I
> have given up on trying to get the resistor interface to work.
>
> Mike - WB9OQB
>
> --- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@> wrote:
> >
> > Mike,
> >
> > For the 3B definitely use the option "msp430f1232" for
> > the IAR setup.
> >
> > -mike
>

2740. where to pick off line level audio?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-21 20:20:38 UTC
From: n0tu/Steve
Topic: 2740 Message: 2740

I'd like to pick off line level audio in my ATS3x to drive my digital recorder with out interrupting the normal audio chain. Is this possible? Any suggestions?

Steve/n0tu

2741. Re: [AT_Sprint] where to pick off line level audio?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-21 21:11:19 UTC
From: Steven Weber
Topic: 2740 Message: 2741

>I'd like to pick off line level audio in my ATS3x to drive my digital
>recorder with out interrupting the normal audio chain. Is this
>possible? Any suggestions?
>
Why not at the headphone jack?

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2742. device to upgrade firmware?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-22 12:49:40 UTC
From: shadle
Topic: 2742 Message: 2742

Are there instructions online anywhere regarding how to build a device to update the firmware on the ATS-3B? I'm about to put in an order with Mouser and figured I'd get the stuff I needed for this little project, too.

Thanks.
-john W4PAH

2743. Re: device to upgrade firmware?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-22 21:50:56 UTC
From: Jim Fraser
Topic: 2742 Message: 2743

John,

I built the simple resistor interface Steve describes in the following message to upgrade the firmware in my 3B:

http://groups.yahoo.com/group/AT_Sprint/message/1869

Some folks were having problems with this configuration and he later made this suggestion:

http://groups.yahoo.com/group/AT_Sprint/message/1884

I built this interface with the 220ohm resistor changes and it worked fine for me. The interface was very simple to build.

Jim K6JF

2744. Steve Weber

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-22 22:12:29 UTC
From: ak3f
Topic: 2744 Message: 2744

Hey, just found this in the newest ARRL letter.

congrats, steve, on whatever the heck it is!

quoting the arrl letter:

The winner with a radio totally without use of a PC is Steve Weber, KD1JV, who came in close behind in overall scoring by the judges. His radio will be described in a subsequent QST article.
---end quote

2745. Re: device to upgrade firmware?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-23 00:32:30 UTC
From: mantermeadows
Topic: 2742 Message: 2745

So if I only have USB ports and no Parallel port...what do I do?

Gary - KC8UD

2746. Re:[AT_Sprint] Re: device to up grade firmware?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-23 00:38:24 UTC
From: J. Haynes
Topic: 2746 Message: 2746

USB adapters seem to work elsewhere, is it so with programming the ATS?

2747. Re: Steve Weber

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-23 01:42:22 UTC
From: Jim Fraser
Topic: 2744 Message: 2747

I just read this from my inbox, too. He won the ARRL Homebrew Challange for a 40 meter, 5 W SSB and CW transceiver that does not require use of a computer. Congrats, Steve!!!

ARRL Homebrew Challenge:
http://www.arrl.org/qst/hbc/

Announcement:
http://www.arrl.org/news/stories/2008/02/22/100/?nc=1

Jim K6JF

--- In AT_Sprint@yahoogroups.com, "ak3f" <mbhayden@...> wrote:
>
> Hey, just found this in the newest ARRL letter.
>
> congrats, steve, on whatever the heck it is!
>
> quoting the arrl letter:
> -----
> The winner with a radio totally without use of a PC is Steve Weber,
> KD1JV, who came in close behind in overall scoring by the judges.
His
> radio will be described in a subsequent QST article.
> ---end quote
>

2748. RE: [AT_Sprint] Re: Steve Weber

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-23 01:47:28 UTC
From: Dale Putnam
Topic: 2744 Message: 2748

No surprise there, but HUGE CONGRATULATIONS.. are in order...
and .. a large pat on the back...
and yet Steve, you do it all with such elegance.. and style.
Atta Boy, you done good!!--... ...--Dale - WC7S in Wy

To: AT_Sprint@yahoogroups.comFrom: jimf53@...: Sat, 23 Feb 2008 01:42:22 +0000Subject: [AT_Sprint] Re: Steve Weber

I just read this from my inbox, too. He won the ARRL Homebrew Challange for a 40 meter, 5 W SSB and CW transceiver that does not require use of a computer. Congrats, Steve!!!ARRL Homebrew Challenge:http://www.arrl.org/qst/hbc/Announcement:http://www.arrl.org/news/stories/2008/02/22/100/?nc=1Jim K6JF--- In AT_Sprint@yahoogroups.com, "ak3f" <mbhayden@...> wrote:>> Hey, just found this in the newest ARRL letter.> > congrats, steve, on whatever the heck it is!> > quoting the arrl letter:> -----> The winner with a radio totally without use of a PC is Steve Weber,> KD1JV, who came in close behind in overall scoring by the judges. His> radio will be described in a subsequent QST article.> ---end quote>

_____
Connect and share in new ways with Windows Live.
http://www.windowslive.com/share.html?ocid=TXT_TAGHM_Wave2_sharelife_012008

2749. Re: device to upgrade firmware?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-23 01:54:41 UTC
From: Jim Fraser
Topic: 2742 Message: 2749

Well, you can get a PCI Parallel Card to add to your computer if it is a desktop.

I also see USB to Parallel adapter cables on eBay for $0.99 + $4.99 shipping. Search for "USB to Parallel Port".

Jim K6JF

2750. USB>Serial Connector.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-23 02:54:34 UTC
From: kc7fys
Topic: 2750 Message: 2750

http://farm4.static.flickr.com/3065/2285194906_ed2b4dc6da_b.jpg
This is what I use.
Jonathan KC7FYS

2751. Re: USB>Serial Connector.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-23 03:00:40 UTC
From: mantermeadows
Topic: 2750 Message: 2751

You use a SERIEL port to do the programming. MAN! I'm getting all kinds
of conflicting information on how to do this.

Gary - KC8UD
--- In AT_Sprint@yahoogroups.com, "kc7fys" <kc7fys@...> wrote:
>
> http://farm4.static.flickr.com/3065/2285194906_ed2b4dc6da_b.jpg
> This is what I use.
> Jonathan KC7FYS
>

2752. Re:[AT_Sprint] Re: USB>Serial C onnector.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-23 04:39:19 UTC
From: J. Haynes
Topic: 2752 Message: 2752

Wiki 'serial' and 'parallel' and it will all seem more clear.

2753. Re: Re:[AT_Sprint] Re: USB>Serial Connector.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-23 12:59:47 UTC
From: Vojtěch Bubník
Topic: 2752 Message: 2753

> Wiki 'serial' and 'parallel' and it will all seem more clear.

USB parallel converters only support printers. They will not allow programming the ATS-3 microcontroller.

If you have a desktop computer, the simplest and cheapest solution is to buy a parallel interface card. If you have a notebook with PCMCIA socket, you could buy a PCMCIA parallel adapter. Some of them are real parallel ports.

The last resort is this USB to parallel converter. It is open source design, but Henrik also sells finished devices.
http://www-user.tu-chemnitz.de/~heha/bastelecke/Rund%20um%20den%20PC/USB2LPT/index.html.en

73, Vojtech OK1IAK

2754. Re:Re: Re:[AT_Sprint] Re: USB>S erial Connector.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-23 14:13:32 UTC
From: J. Haynes
Topic: 2754 Message: 2754

Notably, the USB>serial converter programs the AA908 antenna analyzer and others. But maybe I'm talking about something different.
Jonathan

2755. North American Sprint - RTTY - This evening!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-23 14:34:57 UTC
From: Hank Greeb
Topic: 2755 Message: 2755

The RTTY folks can have a blast this afternoon and evening....

North American QSO Party 14 days
1800Z Feb 23 - 0600Z Feb 24
Details at http://www.ncjweb.com

There IS a QRP category! Might be the time to try out that new s/w for
the ATS-3a and ATS-3b!

2756. DC power on top of the board.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-25 07:00:31 UTC
From: kc7fys
Topic: 2756 Message: 2756

What's a good point to get DC for running a little touchpad keyer? I don't want to run a wire around the front edge of the board to the DC power jack center pin tab. Is there a spot to solder in a little lead?
Thanks,
Jonathan

2757. Re: DC power on top of the board. (Never mind...)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-25 09:08:08 UTC
From: kc7fys
Topic: 2756 Message: 2757

Oops. Disregard post. I'm all set.
Jonathan

--- In AT_Sprint@yahoogroups.com, "kc7fys" <kc7fys@...> wrote:
>
> What's a good point to get DC for running a little touchpad keyer? I
> don't want to run a wire around the front edge of the board to the DC
> power jack center pin tab. Is there a spot to solder in a little lead?
> Thanks,
> Jonathan
>

2758. Re: [AT_Sprint] DC power on top of the board.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-25 13:08:12 UTC
From: Bill Noyce
Topic: 2756 Message: 2758

In the ATS-3, the Seiko voltage regulators in the SOT-89 package have
the input voltage on the big tab. That's where I picked off +V for a
touch keyer I squeezed into my rig.
-- Bill, AB1AV

On Mon, Feb 25, 2008 at 2:00 AM, kc7fys <kc7fys@...> wrote:
>
>
>
>
>
>
> What's a good point to get DC for running a little touchpad keyer? I
> don't want to run a wire around the front edge of the board to the DC
> power jack center pin tab. Is there a spot to solder in a little lead?
> Thanks,
> Jonathan
>
>

2759. @JN1GLB RE: PA Instructions

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-25 15:00:01 UTC
From: Matt
Topic: 2759 Message: 2759

Kasahara san
O genki desu ka?
Watashi no nihongo wa yoku arimasen deshita. Eego wa ii desu ka?

Is this a kit that is available and if not (I noticed there is artwork for a board) will there be an English translation available of the instructions, I can probably work through it with my dictionary but it would take a lot of time. I appreciate any help. I am very interested in this.

Domo arigatou gozaimashita.
E-meru o kudasai.

Matthew Palmer
kd8dao
kd8dao@...

2760. Re: device to upgrade firmware?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-25 17:02:45 UTC
From: shadle
Topic: 2742 Message: 2760

Thanks for the reply, Jim.

So, this is basically what I need to do?

DB25 --> wire --> SIP header --> ATS-3B

I guess the use of the header board and chip is not necessary, then?

http://www.sparkfun.com/commerce/product_info.php?products_id=45

Thanks.
-john W4PAH

"Jim Fraser" <jimf53@...> wrote:
>
> John,
>
> I built the simple resistor interface Steve describes in the following
> message to upgrade the firmware in my 3B:
>
> http://groups.yahoo.com/group/AT_Sprint/message/1869
>
> Some folks were having problems with this configuration and he later
> made this suggestion:
>
> http://groups.yahoo.com/group/AT_Sprint/message/1884
>
> I built this interface with the 220ohm resistor changes and it worked
> fine for me. The interface was very simple to build.
>
> Jim K6JF
>

2761. source for SIP headers and sockets

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-25 19:28:43 UTC
From: John Shadle
Topic: 2761 Message: 2761

Trying to find out if someone could provide a Mouser part number for the headers and sockets for connecting the main ATS-3B to its band boards.

Thanks.
-john W4PAH

2762. Re: source for SIP headers and sockets

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-25 21:29:43 UTC
From: Jim Fraser
Topic: 2761 Message: 2762

John,

I recently ordered the SIP socket strip used on the 3B from Mouser and will email you the part number when I get home tonight. I used them on a small pc board for band module storage.

As for the SIP pins I had found them locally at a surplus electronics store.

Jim K6JF

2763. Re: device to upgrade firmware?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-25 21:30:43 UTC
From: Jim Fraser
Topic: 2742 Message: 2763

> So, this is basically what I need to do?
>
> DB25 --> wire --> SIP header --> ATS-3B

That's correct, John. The DB25 with a few 220 ohm resistors and some pins shorted together for grounds, a piece of ribbon cable, and a SIP header.

Jim K6JF

2764. Re: [AT_Sprint] source for SIP headers and sockets

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-25 22:05:09 UTC
From: Michael Harnage
Topic: 2761 Message: 2764

Search for "Molex 2.54"

Mouser page 1371 for pins and 1368 for housings. This
for catalog 633.

< http://www.mouser.com/catalog/633/1371.pdf >

I generally buy the long sections and cut them to the
length that I need.

-mike

--- John Shadle <shadle@...> wrote:

> Trying to find out if someone could provide a Mouser
> part number for the
> headers and sockets for connecting the main ATS-3B
> to its band boards.
>
> Thanks.
> -john W4PAH
>

_____
Never miss a thing. Make Yahoo your home page.
http://www.yahoo.com/r/hs

2765. Going DX tomorrow need ATS1 manual or instructions

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-25 23:42:48 UTC
From: Sam Billingsley
Topic: 2765 Message: 2765

I am taking my ATS1 to Costa Rica and need instructions can someone help tonight?

Sam AE4GX

2766. Re: source for SIP headers and sockets

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-26 00:32:49 UTC
From: shadle
Topic: 2761 Message: 2766

Just got this from Steve, in case any of you guys are interested.

--
517-974-01-36 for the socket. This is a strip of 36 pins and I used a
razor saw to cut them to length.

517-6211TG for the pins
--

-john

2767. Nice results with the Touchkeyer in ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-26 00:44:52 UTC
From: kc7fys
Topic: 2767 Message: 2767

I have had a ball installing the P3 touchkeyer board in my Bee.
Results here
<http://www.flickr.com/photos/jonathancharles/sets/72157594149567755/>
.
Jonathan KC7FYS/7J1

2768. Re: Going DX tomorrow need ATS1 manual or instructions

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-26 01:27:01 UTC
From: Sam Billingsley
Topic: 2765 Message: 2768

Got the info from John N0HJ. Thanks to all.

Look for me on QRP frequencies 40/30/20 as TI5/AE4GX starting tomorrow night until 3/8/08.

Sam AE4GX

--- In AT_Sprint@yahoogroups.com, "Sam Billingsley" <billingsleysam@...> wrote:
>
> I am taking my ATS1 to Costa Rica and need instructions can someone help tonight?
>
> Sam AE4GX
>

2769. Re: [AT_Sprint] Nice results with the Touchkeyer in ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-26 02:15:11 UTC
From: Vojtěch Bubník
Topic: 2767 Message: 2769

Hi Johnatan.

> I have had a ball installing the P3 touchkeyer board in my Bee.
> Results here
> <http://www.flickr.com/photos/jonathancharles/sets/72157594149567755/>

The chips are not PICs, but QT-113H. I have little doubts about it, even though the touchkeyer seller insists it is a custom programmed PIC. I even asked him directly and he repeats his truth. If it was a custom programmed PIC, then he will not need to file out the chip label. I built mine with two SMD QT-113H chips, that I bought from Farnell.

You did a fancy job, but the keyer is very insensitive, if you glue the electrodes directly to the tin. You found it already by trial and error. The capacitance of the electrodes against the tin is too high. It helps a lot to elevate them. I placed a piece of plastic ruler between the electrodes and tin.

You could find more info on electrodes and sensitivity in QT-113H datasheet.

73, Vojtech OK1IAK

2770. Re: Nice results with the Touchkeyer in ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-26 02:39:26 UTC
From: kc7fys
Topic: 2767 Message: 2770

It sounds like a slightly sensitive point with the maker, so I thank you for your informative response. I'll correct my notation. I'm hooked on this device after using it. I'll upload a video to YouTube soon--it works good, and the PCB substrate does provide at least 1MM of non-conductive material (as your plastic ruler solution suggests).

Thanks again for your constructive remarks,
Jonathan

--- In AT_Sprint@yahoogroups.com, Vojtìch Bubník <bubnikv@...> wrote:
>
> Hi Johnatan.
>
> > I have had a ball installing the P3 touchkeyer board in my Bee.
> > Results here
> >
<http://www.flickr.com/photos/jonathancharles/sets/72157594149567755/>
>
> The chips are not PICs, but QT-113H. I have little doubts about it, even though the touchkeyer seller insists it is a custom programmed PIC. I even asked him directly and he repeats his truth. If it was a custom programmed PIC, then he will not need to file out the chip label. I built mine with two SMD QT-113H chips, that I bought from Farnell.
>
> You did a fancy job, but the keyer is very insensitive, if you glue the electrodes directly to the tin. You found it already by trial and error. The capacitance of the electrodes against the tin is too high. It helps a lot to elevate them. I placed a piece of plastic ruler between the electrodes and tin.
>
> You could find more info on electrodes and sensitivity in QT-113H datasheet.
>
> 73, Vojtech OK1IAK
>

2771. Re: [AT_Sprint] Re: Nice results with the Touchkeyer in ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-26 02:52:27 UTC
From: Vojtěch Bubník
Topic: 2767 Message: 2771

> it works good, and the PCB substrate does provide at least 1MM
> of non-conductive material (as your plastic ruler solution suggests).

I have the PCB material on top of 2mm ruler, so the electrodes are about 3mm above the ground. I tried the PCB itself, but it did not work for me. If you read the datasheet, putting electrode on top of ground is strongly discouraged.

73, Vojtech OK1IAK

2772. Re: Nice results with the Touchkeyer in ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-26 07:36:07 UTC
From: kc7fys
Topic: 2767 Message: 2772

That's what I thought. Well, for now I have fairly good results, but given the chance to do it over, I would definitely choose different material that's both thicker and has a heavier copper. Most likely I'd just use separate elements of copper and substrate. The dit is definitely not sensitive enough without licking my thumb.

My son sucks his thumb--I should ask for his advice.

Thanks as always Vojtich, for your frank assessment.
Jonathan

--- In AT_Sprint@yahoogroups.com, Vojtìch Bubník <bubnikv@...> wrote:
>
> > it works good, and the PCB substrate does provide at least 1MM
> > of non-conductive material (as your plastic ruler solution suggests).
>
> I have the PCB material on top of 2mm ruler, so the electrodes are about 3mm above the ground. I tried the PCB itself, but it did not work for me. If you read the datasheet, putting electrode on top of ground is strongly discouraged.
>
> 73, Vojtech OK1IAK
>

2773. Re: [AT_Sprint] Nice results with the Touchkeyer in ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-26 11:39:28 UTC
From: Michael Harnage
Topic: 2767 Message: 2773

Jonathon,

I finally had a chance to check out the pics. Very
nice. I like the Jetson look! I think touch on the top
is a good way to go. One of my early Spartan Sprint
efforts had a mechanical key on the top as well.

Voj is correct about the chips in the touchkeyer, they
are the QT-113's. This was discussed a couple of years
ago on one of the boards. Don't think he'd loose any
sales on it -- just look at other kits -- all parts
specified etc. Doesn't make any sense to me that he
tries to obfuscate them.

Enjoy, it looks great.

-mike

--- kc7fys <kc7fys@...> wrote:

> I have had a ball installing the P3 touchkeyer board
> in my Bee.

Looking for last minute shopping deals?
Find them fast with Yahoo! Search.
http://tools.search.yahoo.com/newsearch/category.php?category=shopping

2774. Re: Nice results with the Touchkeyer in ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-26 12:49:24 UTC
From: Steven Pituch
Topic: 2767 Message: 2774

See here for info on making touch paddles using the QT113H.
73,
Steve
http://www.pituch.net/p/Steve's%20Page/Radio/SW40+/SW40+.html

2775. Touchkeyer

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-26 16:29:51 UTC
From: Steven Weber
Topic: 2767 Message: 2775

>The chips are not PICs, but QT-113H. I have little doubts about it, even though the touchkeyer seller insists it is a custom programmed PIC. I even asked him directly and he repeats his truth.

I think I saw these at the NH hamfest last fall. At $99.00, I though they were a little pricey. There were two chips on the board I saw, both with the numbers rubbed off. I would assume one was the capacitive switch and the other a PIC keyer chip, as this was a stand alone keyer.

There is a way to make touch sensers using a uP. Basically, you time how long it takes to charge the touch capacitor up to the trigger point of the processor input pin. When you touch the plate, it takes longer to charge. I tried this out and it worked reasonably well, but was pretty sensitive to temperature changes. Trying to make it self calibrating got to be pretty involed, so I gave up on it.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2776. Re: [AT_Sprint] Touchkeyer

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-26 16:45:34 UTC
From: Jim Miller
Topic: 2767 Message: 2776

i think both statements are correct but i base this on circumstantial evidence.

the pinout of the QT-113 is perfectly compatible with the pinout of a 12f683. it is entirely possible that quicktouch uses a pic to implement their design and has them custom marked.

73

jim ab3cv

2777. Re: [AT_Sprint] Touchkeyer

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-26 17:04:13 UTC
From: Michael Harnage
Topic: 2767 Message: 2777

Both chips are the same. There is one for the dit and
one for the dah.

There are other chips in the QT series that would
allow multiple inputs however they are slower and
possibly not suitable for the touchkeyer application.

-mike

--- Steven Weber <kd1jv@...> wrote:

I would assume one was the
> capacitive switch and
> the other a PIC keyer chip, as this was a stand
> alone keyer.
>

Be a better friend, newshound, and
know-it-all with Yahoo! Mobile. Try it now.
http://mobile.yahoo.com/;_ylt=Ahu06i62sR8HDtDypao8Wcj9tAcJ

2778. [Fwd: [QRP-L] Re: QRP Items FS final update]

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-26 19:25:51 UTC
From: Stephen Wandling
Topic: 2778 Message: 2778

I thought maybe someone on this list might want to know that an ATS3 was
for sale.

Stephen
VE7NSD

-------- Original Message --------
Subject: [QRP-L] Re: QRP Items FS final update
Date: Mon, 25 Feb 2008 22:08:39 -0500
From: LL <llachow@...>
To: qrp-l <qrp-l@...>

Items for sale, updated again.

Thanks for the BW; guess these last few "dregs" aren't
going anywhere for awhile?drop a line if you're interested.

All prices include shipping.

Prices are firm.

Payment :

personal check ? shipment upon clearance.

PayPal, price plus 3%, next-day shipping.

Money orders: ship on receipt.

My address is ok on qrz.com.

Shipping via USPS priority, tracking number provided.

Please contact me directly with any questions or offers; thanks for looking.

LL/K3ESE

llachow at gmail dot com (also my paypal adr)

Ultralight ATS-3
Built in sardine tin
Includes LiPo battery-pack
And charger
All band modules
Mono earbud
With one module, weighs under 0.18 lbs
With two modules, weighs under 0.185 lbs
as-is
$200

2779. Re: [AT_Sprint] [Fwd: [QRP-L] Re: QRP Items FS final update]

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-26 20:01:19 UTC
From: John D'Ausilio
Topic: 2778 Message: 2779

it's already gone

On Tue, Feb 26, 2008 at 2:25 PM, Stephen Wandling <swandling@...> wrote:
> I thought maybe someone on this list might want to know that an ATS3 was
> for sale.
>
> Stephen
> VE7NSD
>
> -------- Original Message --------
> Subject: [QRP-L] Re: QRP Items FS final update
> Date: Mon, 25 Feb 2008 22:08:39 -0500
> From: LL <llachow@gmail.com>
> To: qrp-l <qrp-l@...>
>
>
>
> Items for sale, updated again.
>
> Thanks for the BW; guess these last few "dregs" aren't
> going anywhere for awhile…drop a line if you're interested.
>
> All prices include shipping.
>
> Prices are firm.
>
> Payment :
>
> personal check – shipment upon clearance.
>
> PayPal, price plus 3%, next-day shipping.
>
> Money orders: ship on receipt.
>
> My address is ok on qrz.com.
>
> Shipping via USPS priority, tracking number provided.
>
>
> Please contact me directly with any questions or offers; thanks for looking.
>
> LL/K3ESE
>
> llachow at gmail dot com (also my paypal adr)
>

>
> Ultralight ATS-3
> Built in sardine tin
> Includes LiPo battery-pack
> And charger
> All band modules
> Mono earbud
> With one module, weighs under 0.18 lbs
> With two modules, weighs under 0.185 lbs
> as-is
> $200
>
>
>
>
> Yahoo! Groups Links
>
>
>
>

2780. Re: RE-Programming original ATS-3 to allow digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-26 23:45:51 UTC
From: Jim Fraser
Topic: 2712 Message: 2780

Vojtech,

I don't know if you have any plans to do more work with Pocketdigi, but if so, would you consider adding the mode JT65A? This past weekend I worked a fellow in TX from CA and his last comment was "4W HB" (I was running 50w). For a 4 watt hombrew rig he had a weak but decent signal which I had no problem decoding with WSJT. The first thing that popped into mind was my 4w ATS-3B, thinking this weak signal mode would be suited for the ATS-3B.

Jim K6JF

2781. Re: Nice results with the Touchkeyer in ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-27 03:09:20 UTC
From: Jim Fraser
Topic: 2767 Message: 2781

Jonathan:

I too have a touch keyer integrated with my 3B, however mine is the P3SMD. I was also looking at placing the touch pads on top of the tin pencil box I will be using for an enclosure.

A question I have in my mind is would the vibrations from tapping on the enclosure affect the stability of the transmitter frequency? Have you listened to your signal on another receiver while tapping on the pads??

Jim K6JF

--- In AT_Sprint@yahoogroups.com, "kc7fys" <kc7fys@...> wrote:
>
> I have had a ball installing the P3 touchkeyer board in my Bee.
> Results here
>
<http://www.flickr.com/photos/jonathancharles/sets/72157594149567755/>

> .
> Jonathan KC7FYS/7J1
>

2782. Transmitter instability (WAS: Nice results with the Touchkeyer in ATS3B)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-27 11:37:54 UTC
From: kc7fys
Topic: 2767 Message: 2782

--- In AT_Sprint@yahoogroups.com, "Jim Fraser" <jimf53@...> wrote:
>
> Jonathan:
>
> I too have a touch keyer integrated with my 3B, however mine is the
> P3SMD.
> A question I have in my mind is would the vibrations from tapping on
> the enclosure affect the stability of the transmitter frequency? Have
> you listened to your signal on another receiver while tapping on the
> pads??

Embarrassing, but NO, I have not even done that. However, it seems very unlikely mechanical vibration as slight as that of my fingerpad touches could cause instability. That's a question for those more educated than I--but I'd guess it's highly unlikely when compared to the effects of say, temperature or something.
My question would be, is ANYTHING likely to cause transmitter frequency instability in a radio of this type?
Jonathan

2783. Re: Transmitter instability (WAS: Nice results with the Touchkeyer in ATS3B)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-27 17:47:22 UTC
From: Jim Fraser
Topic: 2767 Message: 2783

That's OK, I was just wondering if the thumping would affect the crystals. I did not think the other components would be a problems. I should have my Bee complete within the next couple weeks, I am now prepping the encloseure for painting. Guess it shows that I started out in the hobby back in the vacuum tube days!!

Jim K6JF

--- In AT_Sprint@yahoogroups.com, "kc7fys" <kc7fys@...> wrote:
>
> --- In AT_Sprint@yahoogroups.com, "Jim Fraser" <jimf53@> wrote:
> >
> > Jonathan:
> >
> > I too have a touch keyer integrated with my 3B, however mine is the
> > P3SMD.
> > A question I have in my mind is would the vibrations from tapping on
> > the enclosure affect the stability of the transmitter frequency? Have
> > you listened to your signal on another receiver while tapping on the
> > pads??
>
> Embarrassing, but NO, I have not even done that. However, it seems
> very unlikely mechanical vibration as slight as that of my fingerpad
> touches could cause instability. That's a question for those more
> educated than I--but I'd guess it's highly unlikely when compared to
> the effects of say, temperature or something.
> My question would be, is ANYTHING likely to cause transmitter
> frequency instability in a radio of this type?
> Jonathan
>

2784. Re: [AT_Sprint] Transmitter instability (WAS: Nice results with the Touchkeyer in ATS3B)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-27 22:18:49 UTC
From: Steven Weber
Topic: 2767 Message: 2784

>My question would be, is ANYTHING likely to cause transmitter
>frequency instability in a radio of this type?

Nothing I can think of. If you put the rig in the freezer and then put it in the hot sun, there would be a small drift in frequency as it warmed up. Possibly banging on the reference oscillator with a hammer could make the frequency jump around, at least until something broke!

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2785. Re: Transmitter instability (WAS: Nice results with the Touchkeyer in ATS3B)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-27 23:17:49 UTC
From: kc7fys
Topic: 2767 Message: 2785

Darn. There goes my plans for the HammerKeyer.
Oh, well...
Jonathan

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
>
> >My question would be, is ANYTHING likely to cause transmitter
> >frequency instability in a radio of this type?
>
> Nothing I can think of. If you put the rig in the freezer and then
put it
> in the hot sun, there would be a small drift in frequency as it
warmed up.
> Possibly banging on the reference oscillator with a hammer could
make the
> frequency jump around, at least until something broke!
>
>
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com
>

2786. Re: [AT_Sprint] Re: RE-Programming original ATS-3 to allow digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-29 13:23:50 UTC
From: Vojtěch Bubník
Topic: 2712 Message: 2786

Hi Jim.

> I don't know if you have any plans to do more work with Pocketdigi, but
> if so, would you consider adding the mode JT65A?

JT65 mode is quite complex. It is written in mix of C and Fortran. It would not be straightforward to port it to Pocket PC.

I have some objections for using JT65A on HF. The tone spacing is about 6Hz, which is too close, if the Ionosphere is instable. If you search archive of digitalradio@yahoogroups, you will find reports comparing JT65A on HF to slow Olivia. I would recommend you to try both Olivia and MFSK16 modes. Both of them are already implemented in PocketDigi and are supported by ATS-3b. Also RSID is supported by PocketDigi/ATS-3b, which will simplify mode detection and tuning. The only problem is narrow width of ATS-3b RX filter.

73, Vojtech OK1IAK

2787. Re: RE-Programming original ATS-3 to allow digital modes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-02-29 19:19:20 UTC
From: Jim Fraser
Topic: 2712 Message: 2787

Hi Vojtech,

Thanks for the reponse and information on JT65A. Yes, I know that it is a slow mode which must be why the information passed in a QSO is minimal. It was just an idea.

I have run Olivia and MFSK16 on the big rig so I am familiar with these modes. I do plan to try out the digital modes PocketDigi has to offer as soon as I get my 3B into its enclosure.

72 de Jim K6JF

--- In AT_Sprint@yahoogroups.com, Vojtìch Bubník <bubnikv@...> wrote:
>
> Hi Jim.
>
> > I don't know if you have any plans to do more work with Pocketdigi, but
> > if so, would you consider adding the mode JT65A?
>
> JT65 mode is quite complex. It is written in mix of C and Fortran. It would not be straightforward to port it to Pocket PC.
>
> I have some objections for using JT65A on HF. The tone spacing is about 6Hz, which is too close, if the Ionosphere is instable. If you search archive of digitalradio@yahoogroups, you will find reports comparing JT65A on HF to slow Olivia. I would recommend you to try both Olivia and MFSK16 modes. Both of them are already implemented in PocketDigi and are supported by ATS-3b. Also RSID is supported by PocketDigi/ATS-3b, which will simplify mode detection and tuning. The only problem is narrow width of ATS-3b RX filter.
>
> 73, Vojtech OK1IAK
>

2788. Re: [AT_Sprint] Transmitter instability (WAS: Nice results with the Touchkeyer in ATS3B)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-01 01:47:24 UTC
From: Full Some
Topic: 2767 Message: 2788

I have noted a consistent 10hz of downward drift during the first 10 minutes. The transmitter was not keyed during this time The start off temperature is about 68 F.
During a recent exchange, from a cold start, I was informed of drift but I do not know how stable the other station's xcvr was.

Steven Weber <kd1jv@...> wrote: >My question would be, is ANYTHING likely to cause transmitter
>frequency instability in a radio of this type?

Nothing I can think of. If you put the rig in the freezer and then put it in the hot sun, there would be a small drift in frequency as it warmed up. Possibly banging on the reference oscillator with a hammer could make the frequency jump around, at least until something broke!

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

Be a better friend, newshound, and know-it-all with Yahoo! Mobile. Try it now.

2789. Holy Altoids Batman!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-01 01:58:14 UTC
From: kc7fys
Topic: 2789 Message: 2789

I'm drilling out and stuffing a fresh Altoids tin. One of the traditional signals of Spring in our (sub)culture. I understand that there are cutters and dies in pro shops to make a flat (cogential?) place on a round hole--such as one would want to stop a BNC connector from rotating. How can this seemingly impossible feat be accomplished by the home hobbyist with a drill press? It's definitely not necessary, but wouldn't it be nice to have that type of hole? Any advice?
Jonathan

2790. Re: [AT_Sprint] Holy Altoids Batman!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-01 02:11:45 UTC
From: Jim Miller
Topic: 2789 Message: 2790

just did a few of those this weekend for another project but not in an altoids tin.

i drilled a hole the diameter of the flats then used a fine tooth rattail file to elongate the holes as necessary.

they don't need to be perfect since the circular flange on the bnc hides the uglies and the nut, lug, toothed washer do likewise inside.

73

jim ab3cv

2791. Re: [AT_Sprint] Holy Altoids Batman!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-01 02:20:50 UTC
From: n0tu/Steve
Topic: 2789 Message: 2791

You need a step drill ...Harbor Freight has 'em. Hmm, guess they
make some where on your side of the pond? They look like this:
http://www.harborfreight.com/cpi/ctaf/displayitem.taf?Itemnumber=96275

Steve/n0tu

On Sat, Mar 1, 2008 at 1:58 AM, kc7fys <kc7fys@...> wrote:
> I'm drilling out and stuffing a fresh Altoids tin. One of the
> traditional signals of Spring in our (sub)culture. I understand that
> there are cutters and dies in pro shops to make a flat (cogential?)
> place on a round hole--such as one would want to stop a BNC connector
> from rotating. How can this seemingly impossible feat be accomplished
> by the home hobbyist with a drill press? It's definitely not
> necessary, but wouldn't it be nice to have that type of hole? Any advice?
> Jonathan
>
>
>
>
> Yahoo! Groups Links
>
>
>
>

2792. Re:Re: [AT_Sprint] Holy Altoids Batman!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-01 05:07:21 UTC
From: J. Haynes
Topic: 2792 Message: 2792

Well, I don't think a rotating cutter of any kind can do this. I'm imagining there's a punch or shear of some kind. I have a Dremel, but I just wondered how those 'flatted holes' are made.

2793. Re: Holy Altoids Batman!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-01 05:20:35 UTC
From: radio_kx0r
Topic: 2789 Message: 2793

--- In AT_Sprint@yahoogroups.com, "kc7fys" <kc7fys@...> wrote:
>
> I'm drilling out and stuffing a fresh Altoids tin. One of the
> traditional signals of Spring in our (sub)culture. I understand that
> there are cutters and dies in pro shops to make a flat (cogential?)
> place on a round hole--such as one would want to stop a BNC
connector
> from rotating. How can this seemingly impossible feat be
accomplished
> by the home hobbyist with a drill press? It's definitely not
> necessary, but wouldn't it be nice to have that type of hole? Any
advice?
> Jonathan
>

Jonathan,

I worried about this question before deciding to use an RCA jack. The BNC sometimes requires a lot of force and torque to unmate, and it's really ugly in the winter at low temperatures, when you'd rather not touch metal very much. I use my ATS rigs for winter camping, and the RCA is better.

What really pushed me was that I weighed the two connector sets on a postal scale. A BNC jack and plug together weigh about 1 ounce, while an RCA jack and plug weigh perhaps a third of an ounce. Go ahead and use the BNC if you like, but it's pretty heavy-duty on that thin Altoids box.

Here's how to tighten a BNC jack really tight so it doesn't come loose easily:

Use a toothed lock washer and hex nut on the inside of the box. A flatted hole is great if you can file it to fit (just start with a smaller round hole drilled with a step drill and file the shape you want - it's not difficult in thin metal). Otherwise just use a round hole. To tighten the jack, take just the outer body part from an old BNC plug, and mate it with your jack. Now take a pair of vise-grips and set them to fit and hold the BNC plug body. Tighten the hex nut on the jack with whatever wrench you can fit inside, while holding the front of the jack in place with the plug body held by the vise-grips. If you apply too much torque with the vise grips, you'll ruin the two alignment pins on the front of the BNC jack's outer conductor. After you ruin one, you'll know how tight to go. You can get them tight enough that they don't come loose, without damage, once you learn. Don't try to screw the whole jack into the nut using

the plug body, because that usually requires more torque than setting the nut behind the jack while holding the front steady.

I keep an old BNC plug body handy for this job - just keep it with the jacks. It's all bare brass from various encounters with the vise grips!

You can loctite the nut on the BNC jack also. The outer connection will still be OK.

Don't try to grab the front of a BNC jack with pliers - you'll bend it, mess up the alignment, and likely scratch your box/panel when you slip off.

If you use RCA jacks, go to Radio Shack - believe it or not, they have a superior RCA male - their # 274-319, pack of 4. It has a durable plastic strain relief/cover that screws on precisely. It doesn't pull off when you unmate the connectors. The weight of this plug is minimal. This is the one to use portable.

Steve Weber thought about it when he included that RCA jack in the kit. Even an extra ounce is heavy when you're going to carry it for miles and miles in the mountains. "Take care of the ounces and the pounds will take care of themselves." I think Colin Fletcher said that. RIP...and thanks Colin.

72
KX0R
Carey

2794. Re:[AT_Sprint] Re: Holy Altoids Batman!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-01 05:38:45 UTC
From: J. Haynes
Topic: 2794 Message: 2794

Excellent precis.
RCAs (pin jacks here in JA) might be my next chapter. I've used BNCs mostly because they seem more 'radio-ey' but RCAs seem just simpler.
Jonathan

2795. ATS3 antenna connectors

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-01 14:47:48 UTC
From: ve3wmb
Topic: 2794 Message: 2795

Another option besides RCA is to use a coaxial power jack/plug for the antenna connection.

I think that this was Steve KD1JV's idea, that he either posted to this group or some other. I would just make sure that if you go this route to ensure that it significantly different in size from your actual power connector on the rig, as you might not want to plug the DC supply into the front end of the rig ;-). This reminds me of the Ten-Tec Argonault 509 which has RCAs on the back pretty much for everything and required much care when hooking it up in low light conditions for the above reasons.

Cheers,

Michael VE3WMB

P.S. I have even thought about using TV cable F-type connectors but concluded that since the center-pin is actually the center conductor of the coax that this might not be a great a idea for a pack/field due to the fact that you could easily bend or damage it. I suppose one could keep the ends of the coax mated to a jack while in transit to prevent damage. Certainly these things are ubiquitous and cheap and decent quality ones are rated into the GHZ range.

--- In AT_Sprint@yahoogroups.com, J. Haynes <eggs.4.iggs@...> wrote:
>
> Excellent precis.
> RCAs (pin jacks here in JA) might be my next chapter. I've used BNCs mostly because they seem more 'radio-ey' but RCAs seem just simpler.
> Jonathan
>

2796. Re: Holy Altoids Batman!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-01 15:56:30 UTC
From: mantermeadows
Topic: 2789 Message: 2796

Johnathan,

In one of my former jobs I had several sets of chasis punches on my test bench which were designed to punch holes of all shapes in metal. Some were just round, some were square or rectangle, others were partially round with a flat side. We purchased these sets at one of the local electronics supply stores for around $15 or $20 as I recall. They're fast and simple to use. All you need to do is drill a small pilot hole and then unscrew the chasis punch tool as it comes apart into two peices. One peice with the threaded bolt goes on the outside of the chasis and the other threaded half with the cutting edge goes inside. You tighten the bolt down with a small wrench until it pops right through the chasis creating a clean hole with no burs. Check some of the popular suppliers such as Digi-key in their tools section and you may find a set that includes the size you want.

Gary - KC8UD

2797. Re: Holy Altoids Batman!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-01 16:11:58 UTC
From: kc0pet
Topic: 2789 Message: 2797

--- In AT_Sprint@yahoogroups.com, "kc7fys" <kc7fys@...> wrote:
> I'm drilling out and stuffing a fresh Altoids tin. One of the
> traditional signals of Spring in our (sub)culture. I understand that
> there are cutters and dies in pro shops to make a flat (cogential?)
> place on a round hole--such as one would want to stop a BNC
connector
> from rotating. How can this seemingly impossible feat be
accomplished
> by the home hobbyist with a drill press? It's definitely not
> necessary, but wouldn't it be nice to have that type of hole? Any
advice?
> Jonathan

If one has lots of money, there are special punches made for these things. Since I don't fit in that category, I use a combination of drill bits, and dremel attachments. They never come out real pretty, but they usually work. As someone else pointed out, the lips on the connectors and the washers cover up the "ugly". One nice thing about altoids tins is that if you mess one up, just get a fresh one out and start over. I have also used small wood chisels (make sure they are good and sharp) for rectangular holes in thin material by laying the surface to be cut flat on a board.

Rick

2798. Re: [AT_Sprint] Re: Holy Altoids Batman!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-02 05:09:54 UTC
From: Charles Moizeau
Topic: 2789 Message: 2798

Punches to make the D-shaped holes that snugly mount BNC connectors exist,
but their cost cannot be justified for making just a few such holes.

If you will be mounting these connectors from time to time, it will be worth
your while to make a template that outlines the D-shaped hole. A neat job
can be done using a drill and small files in some aluminum metal stock.

Hold the completed template at the desired location and with the desired
orientation and then scribe the D-shape outline. Drilling and filing will
do a much neater job when you have a scribed outline.

72,

Charles, W2SH

----- Original Message ----- .com>
To: <AT_Sprint@yahoogroups.com>
Sent: Saturday, 01 March, 2008 11:11 AM
Subject: [AT_Sprint] Re: Holy Altoids Batman!

"kc7fys" <kc7fys@...> wrote:
> I'm drilling out and stuffing a fresh Altoids tin. One of the
> traditional signals of Spring in our (sub)culture. I understand that
> there are cutters and dies in pro shops to make a flat (cogential?)
> place on a round hole--such as one would want to stop a BNC
connector
> from rotating. How can this seemingly impossible feat be
accomplished

2799. Re:Re: [AT_Sprint] Re: Holy Alt oids Batman!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-02 06:05:13 UTC
From: J. Haynes
Topic: 2799 Message: 2799

That's the best cheap solution yet. Thanks.
Jonathan

2800. Re: Holy Altoids Batman!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-02 17:22:22 UTC
From: Brian Hall
Topic: 2789 Message: 2800

--- In AT_Sprint@yahoogroups.com, "kc0pet" <kc0pet@...> wrote:
>
> --- In AT_Sprint@yahoogroups.com, "kc7fys" <kc7fys@> wrote:
> > I'm drilling out and stuffing a fresh Altoids tin. One of the
> > traditional signals of Spring in our (sub)culture. I understand
that
> > there are cutters and dies in pro shops to make a flat
(cogential?)
> > place on a round hole--such as one would want to stop a BNC
> connector
> > from rotating. How can this seemingly impossible feat be
> accomplished
> > by the home hobbyist with a drill press? It's definitely not
> > necessary, but wouldn't it be nice to have that type of hole?
Any
> advice?
> > Jonathan
>
> If one has lots of money, there are special punches made for these
> things. Since I don't fit in that category, I use a combination
of
> drill bits, and dremel attachments. They never come out real
pretty,
> but they usually work. As someone else pointed out, the lips on
the
> connectors and the washers cover up the "ugly". One nice thing
about
> altoids tins is that if you mess one up, just get a fresh one out
and
> start over. I have also used small wood chisels (make sure they
are
> good and sharp) for rectangular holes in thin material by laying
the
> surface to be cut flat on a board.
>
> Rick
>

I use some backing and drill a pilot hole first, then either a step drill (cheap at Harbor Freight Tools) or tapered reamer to gently widen the hole as necessary.

As far as keeping a BNC connector from turning...that's easy. Solder it to the Altoids tin. These tins take solder readily and are great for soldering Bulkhead Connectors and for use as a common ground

plane.

Brian AC7NA

2801. Re: [AT_Sprint] Holy Altoids Batman!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-04 19:20:10 UTC
From: Steve
Topic: 2789 Message: 2801

How about using a nibbling tool to cut the notch from the drilled hole?
Steve
aa8af

2802. Re: Holy Altoids Batman!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-04 22:47:22 UTC
From: mantermeadows
Topic: 2789 Message: 2802

A nibbling tool will do just the opposite of what needs to be done. You don't want to cut away more metal after drilling a hole. Part of the hole needs to be closed up. I thought of that too but then I had to realize I was thinking in the wrong direction.

Gary - KC8UD

2803. Re: [AT_Sprint] Holy Altoids Batman!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-04 22:55:08 UTC
From: Charles Moizeau
Topic: 2789 Message: 2803

Steve,

Because of the thinness of the metal and the small size of the desired D-shaped hole, a nibbler is probably too big a tool to control easily. A carefully manipulated needle file will provide the delicate touch needed.

The round hole that is drilled initially (with the metal backed up with a piece of wood) should have a diameter that will be slightly less than the distance between the center of the desired flat side of the D and the periphery of the desired round side at 180 degrees opposite.

Use flat, square or triangular needle files to establish the desired length of the flat side.

Then use round (rat tail) files, choosing the maximum file diameter that will never touch the flat side, to complete the circular periphery of the hole.

It all works best if you have previously made a template and use that to scribe an accurate outline of the desired D-shaped hole.

Finally, and most importantly, it's fun to do. After the first one, your results should improve markedly.

72,

Charles, W2SH

----- Original Message -----
From: "Steve" <lawresh@...>
To: <AT_Sprint@yahoogroups.com>
Sent: Tuesday, 04 March, 2008 02:20 PM
Subject: Re: [AT_Sprint] Holy Altoids Batman!

> How about using a nibbling tool to cut the notch from the drilled hole?
> Steve
> aa8af
>
>

2804. ATS-3B kits available for sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-06 02:59:11 UTC
From: Steven Weber
Topic: 2712 Message: 2804

For those in the group who may still be wanting to buy a ATS-3B, I have six (6) kits available for immediate shipping and could have more ready in about a week if that isn't enough. I'll be leaving for my spring hike on the AT about March 27th, so if you want one of these you must act quickly, otherwise wait until I get back in June.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2805. Re: [AT_Sprint] ATS-3B kits available for sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-06 04:27:40 UTC
From: c Weiss
Topic: 2712 Message: 2805
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2806. Re: ATS-3B kits available for sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-06 06:26:03 UTC
From: radio_kx0r
Topic: 2712 Message: 2806

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:

Steve,

The duration of your trip suggests that you may be planning to hike the entire AT - is this true?

Any chance you're taking a radio?

Will you please post any information so that some of us could contact you - if not, we respect your desire to escape this world into that world out there.

Thanks

Carey Fuller
KX0R

> For those in the group who may still be wanting to buy a ATS-3B, I have six
> (6) kits available for immediate shipping and could have more ready in
> about a week if that isn't enough. I'll be leaving for my spring hike on
> the AT about March 27th, so if you want one of these you must act quickly,
> otherwise wait until I get back in June.
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com
>

2807. RE: [AT_Sprint] ATS-3B kits available for sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-06 13:03:38 UTC
From: Dale Putnam
Topic: 2712 Message: 2807

Me too... (oh I don't like to post me too isms....) But this time..
I'll make an exception.
Thanks, Steve.--... ...--Dale - WC7S in Wy

To: AT_Sprint@yahoogroups.comFrom: mr.cweiss@...: Wed, 5 Mar 2008 20:27:40 -0800Subject: Re: [AT_Sprint] ATS-3B kits available for sale

Steve,

Count me in !! Please !!

I sent a confirmation to your personal email address.

73 es gud dx to all,

conrad -- nn6cw

****
On 3/5/08, Steven Weber <kd1jv@...> wrote:

For those in the group who may still be wanting to buy a ATS-3B, I have six(6) kits available for immediate shipping and could have more ready inabout a week if that isn't enough. I'll be leaving for my spring hike onthe AT about March 27th, so if you want one of these you must act quickly,otherwise wait until I get back in June. 72,Steve, KD1JV"Melt Solder"White Mountains of New Hampshirehttp://kd1jv.qrpradio.com

_____
Need to know the score, the latest news, or you need your Hotmail®-get your "fix".
http://www.msnmobilefix.com/Default.aspx

2808. Re: [AT_Sprint] Re: ATS-3B kits available for sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-06 13:04:55 UTC
From: Bill Noyce
Topic: 2712 Message: 2808

On Thu, Mar 6, 2008 at 1:26 AM, radio_kx0r <careyfuller@...> wrote:
>
> Steve,
>
> The duration of your trip suggests that you may be planning to hike
> the entire AT - is this true?
>

Not likely! Most through-hikers take close to six months.

But it would be interesting to know what section you're planning to
tackle, and whether you're going to try taking a radio again. And
remind us of the address if you're going to publish a blog...

-- Bill, AB1AV

2809. Re: Crank power

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-06 13:41:50 UTC
From: bill_noyce
Topic: 1984 Message: 2809

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
>
> >In short, it would comsume less (human) power to carry the small
> >solar panel(s) and/or additional batteries...
> >
> I'm afraid your right Mike. The only problem with the solar scheme is I
> might not be able to spend enough time in the sun to make that viable
> either. I need to find a really tiny and light AC charger or make
one. But
> when you get to a hostel and theres 10 hikers there who want to charge
> their cell phone in the one electrical outlet available, thats a problem
> too. Well, I got all winter to think of a solution.
>
>
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com
>
Looking over old posts ...

How about building your AC charger with both an AC plug and a
pass-thru AC socket, so you can share the outlet with someone else?
And if you make it have two sockets, you'll probably get first dibs at
the hostel outlet!
-- Bill, AB1AV

2810. Re: ATS-3B kits available for sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-06 13:52:52 UTC
From: Bill
Topic: 2712 Message: 2810

I would love to have one too, but what is the process. Is it the first 6 checks you receive, like was done in the beginning? If your just taking a list from this group, please add me and thank you for making these available.
73, Bill NT9K..

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
>
> For those in the group who may still be wanting to buy a ATS-3B, I have six
> (6) kits available for immediate shipping and could have more ready in
> about a week if that isn't enough. I'll be leaving for my spring hike on
> the AT about March 27th, so if you want one of these you must act quickly,
> otherwise wait until I get back in June.
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com
>

2811. Re: [AT_Sprint] ATS-3B kits available for sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-06 13:54:29 UTC
From: Dan
Topic: 2712 Message: 2811

I replied to your personal e-mail as well as notifying you here that
I'd like one of the 6 if any are left.

-Dan, AB9ME

On Wed, Mar 5, 2008 at 8:59 PM, Steven Weber <kd1jv@...> wrote:
>
>
>
>
>
>
> For those in the group who may still be wanting to buy a ATS-3B, I have six
> (6) kits available for immediate shipping and could have more ready in
> about a week if that isn't enough. I'll be leaving for my spring hike on
> the AT about March 27th, so if you want one of these you must act quickly,
> otherwise wait until I get back in June.
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com
>

2812. Re: [AT_Sprint] Re: Crank power

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-06 15:55:25 UTC
From: Steven Weber
Topic: 1984 Message: 2812

>Looking over old posts ...
>
>How about building your AC charger with both an AC plug and a
>pass-thru AC socket, so you can share the outlet with someone else?
>And if you make it have two sockets, you'll probably get first dibs at
>the hostel outlet!
> -- Bill, AB1AV

That would increase the bulk of the charger. I found a nice tiny charger for a Bluetooth headset which works with the PDA - bearly. Most Hostels will give hikers a ride to the a local supermarket. If they are starved for electrical outlets, I could buy a three way AC plug there to donate to the place :-)

I figured out a way to attach the little solar charger to the top of my pack. I glued the barrel of a bic pen on either side of the solar charger case to run elastic cord through and then clip to tabs on the top pocket of the pack. Since the trees up on the ridge line don't leaf out until well into May, there is usually plenty of sun, if its not cloudy all day.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2813. Hiking trip

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-06 16:19:02 UTC
From: Steven Weber
Topic: 2712 Message: 2813

>The duration of your trip suggests that you may be planning to hike
>the entire AT - is this true?
>
I hope to do about 1/2 of it, from the start of the trail on Springer Mt to Harpers Ferry. Thats assuming I can manage to average about 15 miles a day and not hurt myself!

>Any chance you're taking a radio?
>
Yes, but I may not carry it all the time. Will likely "bump" it ahead from time to time skipping some of the harder and longer streaches between town stops when more food has to be carried. Historically, I have not used the rig much on the trail. At the end of the day, I mostly just want to eat dinner and go to bed :-) I may try mostly doing PSK since I'll have the PDA. That might be easier then trying to bang out CW.

I have a trail journal going at www.trailjournals.com under the trail name Slo-go'en.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2814. Re: [AT_Sprint] Re: ATS-3B kits available for sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-06 16:44:43 UTC
From: Steven Weber
Topic: 2712 Message: 2814

>I would love to have one too, but what is the process. Is it the first
>6 checks you receive, like was done in the beginning? If your just
>taking a list from this group, please add me and thank you for making
>these available.

Bill,

First 6 emails saying their ready to buy. Your #7 so will have to wait
until I kit up a few more next week. I'm waiting on 1 part which is in
transit to complete more. It might be here tommorow, but more likely
Monday. In the mean time you can send a check for $190.00 to me at

Steven Weber
633 Champalin St
Berlin NH 03570

and your kit will be ready when your letter gets here.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2815. Re: [AT_Sprint] ATS-3B kits available for sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-06 15:11:23 UTC
From: Tiana
Topic: 2712 Message: 2815

I would like one.

Tiana KE5ODX

-----Original Message-----
From: Steven Weber
Sent: Mar 5, 2008 8:59 PM
To: AT_Sprint@yahoogroups.com
Subject: [AT_Sprint] ATS-3B kits available for sale

For those in the group who may still be wanting to buy a ATS-3B, I have six (6) kits available for immediate shipping and could have more ready in about a week if that isn't enough. I'll be leaving for my spring hike on the AT about March 27th, so if you want one of these you must act quickly, otherwise wait until I get back in June.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2816. Re: ATS-3B kits available for sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-07 19:31:34 UTC
From: tf3kx
Topic: 2712 Message: 2816

I will sign up for one, Steve.

Having one soon would be good, but I am ready to wait for the June batch if it comes to that. Especially if you would think those would have any kind of refinements. Right now I am finishing up my K2 kit, which will keep me busy for the next few weeks.

Drop me a mail: kristinn1 (at) gmail.com if needed.

73 - and have fun on that trip! Kristinn, TF3KX
http://radio.tf3kx.googlepages.com

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:
>
> For those in the group who may still be wanting to buy a ATS-3B, I have six
> (6) kits available for immediate shipping and could have more ready in
> about a week if that isn't enough. I'll be leaving for my spring hike on
> the AT about March 27th, so if you want one of these you must act quickly,
> otherwise wait until I get back in June.
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com
>

2817. Re: [AT_Sprint] ATS-3B kits available for sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-08 03:22:18 UTC
From: Joe Liszeski
Topic: 2712 Message: 2817

Steve,

If you have any kits available. I would be interested in one. I can send a check or PayPal.

thanks,

de Joe K8JWL

----- Original Message ----
From: Steven Weber <kd1jv@...>
To: AT_Sprint@yahoogroups.com
Sent: Wednesday, March 5, 2008 9:59:11 PM
Subject: [AT_Sprint] ATS-3B kits available for sale

For those in the group who may still be wanting to buy a ATS-3B, I have six
(6) kits available for immediate shipping and could have more ready in
about a week if that isn't enough. I'll be leaving for my spring hike on
the AT about March 27th, so if you want one of these you must act quickly,
otherwise wait until I get back in June.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv. qrpradio. com

_____
Never miss a thing. Make Yahoo your home page.
http://www.yahoo.com/r/hs

2818. Optivisor for SMD work

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-10 00:25:55 UTC
From: Steven Pituch
Topic: 2818 Message: 2818

Hi all,
I am getting ready to work on my ATS3b kit. I have plenty of experience with through hole assembly building my complete K2 over the years, but haven't had much SMD experience. My eyes are are getting really bad too.
I was thinking of buying an optivisor. I wonder what strength to get. I have not read too much on the Internet about using then for SMD work, or what size to get. They seem to be very popular with jewelry makers. I thought the DA-7 would be about right with a 6 inch working distance in front of the lenses and a 2.75X magnification, but wondering if anyone has any advice on this.
Thanks,
Steve, W2MY

2819. Re: [AT_Sprint] Optivisor for SMD work

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-10 00:30:50 UTC
From: john
Topic: 2818 Message: 2819

The cheapo version for abt 8$ with the swing down compound lenses, work great.
john k5mo
---- Steven Pituch <list2@...> wrote:
> Hi all,
> I am getting ready to work on my ATS3b kit. I have plenty of experience
> with through hole assembly building my complete K2 over the years, but
> haven't had much SMD experience. My eyes are are getting really bad
> too.
> I was thinking of buying an optivisor. I wonder what strength to get.
> I have not read too much on the Internet about using then for SMD work,
> or what size to get. They seem to be very popular with jewelry makers.
> I thought the DA-7 would be about right with a 6 inch working distance
> in front of the lenses and a 2.75X magnification, but wondering if
> anyone has any advice on this.
> Thanks,
> Steve, W2MY
>
>
>
>
> Yahoo! Groups Links
>
>
>

2820. Re: [AT_Sprint] Optivisor for SMD work

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-10 01:33:45 UTC
From: Gil Stacy
Topic: 2818 Message: 2820
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2821. Re: Optivisor for SMD work

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-10 08:01:17 UTC
From: sm0xg
Topic: 2818 Message: 2821

Hi Steve,

Few years ago I bought a simple binocular 10X / 20X microscope in a local hobby shop for about $150 (probably Chinese or Indian). I mounted it through a plastic tray to prevent small items from flying away. I am 77 yrs and have to use strong reading glasses, but with this microscope I could effortlessly handsolder my ATS-3B without any faults. I used very thin 34 SWG solder wire, so I had to feed a length for each soldering. I recommend you to try some kind of microscope!

73 / Karl / SM0XG

-- In AT_Sprint@yahoogroups.com, "Steven Pituch" <list2@...> wrote:
>
> Hi all,
> I am getting ready to work on my ATS3b kit. I have plenty of
experience
> with through hole assembly building my complete K2 over the years,
but
> haven't had much SMD experience. My eyes are are getting really
bad
> too.
> I was thinking of buying an optivisor. I wonder what strength to
get.
> I have not read too much on the Internet about using then for SMD
work,
> or what size to get. They seem to be very popular with jewelry
makers.
> I thought the DA-7 would be about right with a 6 inch working
distance
> in front of the lenses and a 2.75X magnification, but wondering if
> anyone has any advice on this.
> Thanks,
> Steve, W2MY
>

2822. Re: Optivisor for SMD work

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-11 01:28:21 UTC
From: Eric Engler
Topic: 2818 Message: 2822

--- In AT_Sprint@yahoogroups.com, "Gil Stacy" <gilstacy@...> wrote:

> I use lightweight MagEyes for my smd work.

I'm curious about how normal perscription eyeglasses would work with various magnifiers? My left eye is much weaker than my right eye, so I either need a magnifier that can go over my glasses, or else one that has adjustable strengths in each eye. Does anyone have suggestions?

Eric

2823. Re: [AT_Sprint] Re: Optivisor for SMD work

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-11 01:47:24 UTC
From: Gil Stacy
Topic: 2818 Message: 2823
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2824. Optivisor

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-11 04:50:37 UTC
From: Tim Keene
Topic: 2824 Message: 2824

I bought a visor from Harbor Frieght for 5 Bucks. It worked great for me. For the price, it might be worth a try.
Tim - K5DEZ

2825. Re: Optivisor for SMD work

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-11 11:59:41 UTC
From: Steven Pituch
Topic: 2818 Message: 2825

OK,
Thanks everyone for the input so far. My biggest question now is what strength of optivisor or mageyes do you people prefer for smt work.

I am thinking that getting an optivisor or Mageyes will need to be done via an Internet purchase. Hard to try on first. I did see that Harbor Freight also has a deluxe one for $10 that has 4 interchangeable lenses. Probably some distortion for that price, but I may try that one or the $5 one first.

72,
Steve, W2MY
Corpus Christi

2826. Re: Optivisor for SMD work

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-11 12:20:35 UTC
From: Steven Pituch
Topic: 2818 Message: 2826

Hi all,
Just found that the Joann sewing store on the Internet has Mageyes sets with the #2 and #4 lenses, or the #5 and #7 lenses. I will stop in today to the local store and see what they have. I have been cautioned about getting too much magnification but the one chip on the ATS3b board has a pretty fine pitch and am thinking the latter set would be better.

I only now have an old Nikon 7x loupe from my old view camera days, and a lighted magnifier lamp on a scissors boom from I think Office Depot. They are both nice but not really effective enough for the fine pitches. I have an old PCI card that I was using as a guinea pig and I really can't see close enough with these two devices.

Steve, W2MY

2827. Re: [AT_Sprint] Re: Optivisor for SMD work

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-11 12:23:25 UTC
From: Gil Stacy
Topic: 2818 Message: 2827
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2828. Re: Optivisor for SMD work

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-11 13:19:22 UTC
From: Buddy Brown
Topic: 2818 Message: 2828

I use the cheap one from Harbor Freight over my prescription glasses. They work very well, and they also have a flip-down higher power lens for when you need that extra magnification.
Buddy - N5BUD

2829. Re: [AT_Sprint] Optivisor for SMD work

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-11 21:58:57 UTC
From: james.rushforth@tesco.net
Topic: 2818 Message: 2829

Hi Steve
Like you I had never worked with surface mount devices and my eyesight was not what it was! I purchased 3D binocular, magnifier (plastic and not very expensive) it has a 2.75 magnification and focuses at about 8" from the work. It fits over my glasses and by tilting my head I can either use my glasses or the magnifier. It worked absolutely fine and I got the 3b working first time.
I also had a small glass hand lens which I used in conjunction with the magnifier to read component values and to check and check again for solder bridges and correctly placed components.
My main problem was stopping the components sticking to the soldering iron tip. The best solution was to hold them down with my fingernail or a small pair of tweezers. Do work in tray to stop them from shooting onto the floor.
Best luck with the project. This is a super rig and I have had lots of contacts using 2W on 80m and 40m - the only bands open at the moment when I get home from work! At the moment I am using an 80m triangular loop and it does tend to overload a bit at night. I slightly detuned the 40m RF filter to remove the problem. I will probably have to re-peak it for portable operation. Maybe it won't be such a problem away from Europe with its powerful broadcast stations close to 40m

Jim G3ZPD

---- Steven Pituch <list2@...> wrote:
>Hi all,
>I am getting ready to work on my ATS3b kit. I have plenty of experience
>with through hole assembly building my complete K2 over the years, but
>haven't had much SMD experience. My eyes are are getting really bad
>too.
>I was thinking of buying an optivisor. I wonder what strength to get.
>I have not read too much on the Internet about using then for SMD work,
>or what size to get. They seem to be very popular with jewelry makers.
>I thought the DA-7 would be about right with a 6 inch working distance
>in front of the lenses and a 2.75X magnification, but wondering if
>anyone has any advice on this.
>Thanks,
>Steve, W2MY
>

2830. Re: Optivisor for SMD work

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-13 11:59:13 UTC
From: eplerkeppler
Topic: 2818 Message: 2830

Steve,

You could always pretend like you are Steve Martin.

Opti-Grab: http://www.opti-grab.ca/opti-grab.jpg

-- Charles WC5MC

--- In AT_Sprint@yahoogroups.com, "Steven Pituch" <list2@...> wrote:
>
> Hi all,
> I am getting ready to work on my ATS3b kit. I have plenty of experience
> with through hole assembly building my complete K2 over the years, but
> haven't had much SMD experience. My eyes are are getting really bad
> too.
> I was thinking of buying an optivisor. I wonder what strength to get.
> I have not read too much on the Internet about using then for SMD work,
> or what size to get. They seem to be very popular with jewelry makers.
> I thought the DA-7 would be about right with a 6 inch working distance
> in front of the lenses and a 2.75X magnification, but wondering if
> anyone has any advice on this.
> Thanks,
> Steve, W2MY
>

2831. Re: [AT_Sprint] Re: Optivisor for SMD work

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-13 12:07:08 UTC
From: Gil Stacy
Topic: 2818 Message: 2831
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

2832. Re: Optivisor for SMD work

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-13 16:04:40 UTC
From: Steven Pituch
Topic: 2818 Message: 2832

Hi all,
Thanks everyone for the input on the magnifiers available.

I went to Harbor freight as it was my first choice and they had nothing in stock.
I went to Joann Fabrics because that was my second choice as they advertized Mageyes, but they had nothing in stock.
I went to Hobby Lobby but they had nothing in stock.

I ended up at Altex Computer. They had various Optivisors. They let me try them on. I finally got the NA-7 (2.75X). It was on close out for $29.95. With the ICs on my test PCI card I brought along, it really seemed to be the best for me.

While I was at Altex I bought some fine desoldering braid and liquid solder.

I promised myself that I would finish my ARRL EC-003 training course before tackling the ATS3-b. I have 11 lessons to go. Let see how long it takes...

Steve, W2MY

2833. Dead Bee

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-14 08:23:36 UTC
From: kc7fys
Topic: 2833 Message: 2833

Hm. OK, well, while working on a sort of prototype of JN1GLB's Altoids PA (beta version of assembly manual and READ_ME in files section), I went to hook up my 3B and noticed something odd--no output.
My WM-2 needle will barely move on transmit (9.2V power in) on the most sensitive mW setting, and the computer part of it functions right, scrolling through functions and whatnot, keyer works and paddles work--but basically ZERO joy on transmit. It worked before and I was able to tweak up to about 4.7watts out on all bands.
Waaaa. What should I be checking first? Connections look good. If I'm not mistaken, a load mismatch would trip the protection circuit, right? So my finals wouldn't be toasted (how do I check that?)
Tips please,
Jonathan

2834. "He's not dead yet."

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-14 10:00:55 UTC
From: Jonathan
Topic: 2834 Message: 2834

3B lives.
I gotta watch my hair-trigger on the SEND button.
Occam's Razor shows that it was something exceedingly simple. The jacket side of the output BNC was cold-soldered to the PCB ground.
Look for me on the air.
Jonathan

2835. Wild untamed parts

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-15 14:18:52 UTC
From: Dale Putnam
Topic: 2835 Message: 2835

You know, before something happens.... you plan ahead, and are very aware of the possibilities, and even consider what you will do "IF" the something happens. All this pre-planning usually pays off.. however, during all this pre-planning, necessary and to some extent, optional, however much it may be, there is always that little... tiny... tingle.... in the back of your mind... that tells you.... somehow... somewhen... that it is pretty much impending, and without fail... will happen.
So... when it does... and that little 270 ohm SMT resistor leaves... in such a huff... offended, apparently by the inadvertant touch of the point of the tweezers, the sinking feeling in the pit of my stomoch, is overwhelmed by the gratification that... "No worry, plans have been made, it will be stopped by the edge of the large pan" So... after searching the pan.... with all the surrounding area, the sinking feeling returns... a bit stronger, this time, as the realization sinks in.. that the little resistor has, in its fit of irritation, "left the pan". So... plans have been thought through... and now, one must follow those plans.. for fear that the sinking feeling will swallow up the "pre-planning safety". Now... it is down, to the floor, cement, and no hiding places.... non.... not even a spec... (as seen from the "before" side). However.. as seen from the "the little critter got outta the barn - ad the door wasn't even open" side...there must be either 1. a secluded hiding place, or 2. the little feller was a lot wilder and untamed than ever expected.

So, after looking at a few places... I suppose it may be best to "suck it up" and order one....
Somehow.. it just seems rather outta the fence line.... that the wild, untamed sucker is 7 cents.... but the
total order is a 300 times that.... plus postage.

Maybe the best plan would be to insure that there are enough wild, untamed critters in the corral, to insure that there is one available for taming.. the next time?

So.... one of those large shippers, should be expecting a large order.... including at least of few of each color, size, and shape....
so much for pre-planning... no... wait. This is pre-planning... just a bit further over the next hill than usual.

hmmm... one wonders... if ropin one of them critters that has already been tamed, would pay off?
hmmmm.. at least they are tied up....

--... ...--
Dale - WC7S in Wy

_____
Connect and share in new ways with Windows Live.
http://www.windowslive.com/share.html?ocid=TXT_TAGHM_Wave2_sharelife_012008

2836. Re: [AT_Sprint] Wild untamed parts

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-15 14:38:50 UTC
From: Steven Pituch
Topic: 2835 Message: 2836

```
----- Original Message -----
From: "Dale Putnam" <daleputnam@...>
To: "AT Sprint" <at_sprint@yahoogroups.com>; <qrp-l@...>;
"QRP-Z@..." <qrp-z@...>
Sent: Saturday, March 15, 2008 9:18 AM
Subject: [AT_Sprint] Wild untamed parts

>
> You know, before something happens.... you plan ahead, and are very aware
> of the possibilities, and even consider what you will do "IF" the
> something happens. All this pre-planning usually pays off.. however,
> during all this pre-planning, necessary and to some extent, optional,
> however much it may be, there is always that little... tiny... tingle....
> in the back of your mind... that tells you.... somehow... somewhen... that
> it is pretty much impending, and without fail... will happen.
> So... when it does... and that little 270 ohm SMT resistor leaves... in
> such a huff... offended, apparently by the inadvertant touch of the point
> of the tweezers, the sinking feeling in the pit of my stomoch, is
> overwhelmed by the gratification that... "No worry, plans have been made,
> it will be stopped by the edge of the large pan" So... after searching
> the pan.... with all the surrounding area, the sinking feeling returns...
> a bit stronger, this time, as the realization sinks in.. that the little
> resistor has, in its fit of irritation, "left the pan". So... plans have
> been thought through... and now, one must follow those plans.. for fear
> that the sinking feeling will swallow up the "pre-planning safety". Now...
> it is down, to the floor, cement, and no hiding places.... non.... not
> even a spec... (as seen from the "before" side). However.. as seen from
> the "the little critter got outta the barn - ad the door wasn't even open"
> side...there must be either 1. a secluded hiding place, or 2. the little
> feller was a lot wilder and untamed than ever expected.
>
> So, after looking at a few places... I suppose it may be best to "suck it
> up" and order one....
> Somehow.. it just seems rather outta the fence line.... that the wild,
> untamed sucker is 7 cents.... but the
> total order is a 300 times that.... plus postage.
>
> Maybe the best plan would be to insure that there are enough wild, untamed
> critters in the corral, to insure that there is one available for taming..
> the next time?
>
> So.... one of those large shippers, should be expecting a large order....
> including at least of few of each color, size, and shape....
> so much for pre-planning... no... wait. This is pre-planning... just a bit
> further over the next hill than usual.
```

>
>
> hmmm... one wonders... if ropin one of them critters that has already been
> tamed, would pay off?
> hmmmm.. at least they are tied up....
>
>
> --... ...--
> Dale - WC7S in Wy
>
> _____
> Connect and share in new ways with Windows Live.
> http://www.windowslive.com/share.html?ocid=TXT_TAGHM_Wave2_sharelife_012008
> ==
> Groups related to AT_Sprint
> ==
>
> softrock40 (165 common members)
>
http://groups.yahoo.com/group/softrock40?v=1&t=ipt&ch=email&pub=groups&slk=aftr0&sec=recg
> Amateur and Ham Radio/Shortwave: The SoftRock-40 is a small, low-cost,
> good perform...
>
> hfpack (133 common members)
> http://groups.yahoo.com/group/hfpack?v=1&t=ipt&ch=email&pub=groups&slk=aftr1&sec=recg
> Science/Other: HFPACK GROUP HFPACK.COM International group for ha...
>
> FT817 (96 common members)
> http://groups.yahoo.com/group/FT817?v=1&t=ipt&ch=email&pub=groups&slk=aftr2&sec=recg
> Hobbies/Amateur and Ham Radio: The first, largest and most comprehensive
> group di...
>
>
> ----------
>
> Yahoo! Groups Links
>
>
>
>
>
> --
> No virus found in this incoming message.
> Checked by AVG.
> Version: 7.5.519 / Virus Database: 269.21.7/1329 - Release Date: 3/14/2008
> 12:33 PM
>
>

2837. Re: Wild untamed parts

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-15 14:46:28 UTC
From: Steven Pituch
Topic: 2835 Message: 2837

Sorry for the blank previous post. Seems if you double click "reply" the next screen has "send" there and off it goes.

In preparation for the creation of my ATS3b, I have procured a 12x24 inch static mat and I just bought a bare metal 105."x15.4" Enchilada pan (I guess thats what they call a cake pan in Texas). I am assuming that the anti-part-deflection-containment-vessel cake pan goes on top of the static mat. Any suggestions?
Thanks,
Steve, W2MY

2838. Re: [AT_Sprint] Wild untamed parts

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-16 00:12:19 UTC
From: Steven Weber
Topic: 2835 Message: 2838

Dale,

I'll send you another 270 ohm resistor. Just try not to loose any more parts before I leave for 2 months on the 27th!

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2839. Tapper Keyer Sensitivity

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-16 05:11:48 UTC
From: kc7fys
Topic: 2839 Message: 2839

Howdy,
Welp, after tooting my horn and being very reasonably and mildly warned by Vojtech about the use of the touch keyer on the Altoids tin directly, I need a tiny bit of advice. Despite the educated opinions of some, this configuration works quite well. Just one problem, though--I send 7J2... instead of 7J1... It seems to add a dit at inopportune times. Not good to have defective keying. This seems to happen above 15WPM only--so it leads me to believe I might be able to tweak capacitance on that pad and get a suitable response.
I actually don't know what I'm talking about in the sense that: do I want MORE or LESS sensitivity to get that odd extra dit outta there?
Any actual experiences would be appreciated.
Here's the video of what I'm talking about:
<http://uk.youtube.com/watch?v=yqnt2zUpJcw>
Jonathan

2840. Re: Tapper Keyer Sensitivity

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-16 17:44:32 UTC
From: Jim Fraser
Topic: 2839 Message: 2840

I also have some problems with additional dits at times. My touch pads are on a plastic box. I find that I have to concentrate more on my sending and just need to learn to be quicker getting the fingers up off the pads. I am so used to keeping my fingers on the paddle that it is a hard habit to break.

Jim K6JF

--- In AT_Sprint@yahoogroups.com, "kc7fys" <kc7fys@...> wrote:
>
> Howdy,
> Welp, after tooting my horn and being very reasonably and mildly
> warned by Vojtech about the use of the touch keyer on the Altoids
tin
> directly, I need a tiny bit of advice. Despite the educated opinions
> of some, this configuration works quite well. Just one problem,
> though--I send 7J2... instead of 7J1... It seems to add a dit at
> inopportune times. Not good to have defective keying. This seems to
> happen above 15WPM only--so it leads me to believe I might be able
to
> tweak capacitance on that pad and get a suitable response.
> I actually don't know what I'm talking about in the sense that: do I
> want MORE or LESS sensitivity to get that odd extra dit outta there?
> Any actual experiences would be appreciated.
> Here's the video of what I'm talking about:
> <http://uk.youtube.com/watch?v=yqnt2zUpJcw>
> Jonathan
>

2841. Re: [AT_Sprint] Re: Tapper Keyer Sensitivity

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-16 17:49:05 UTC
From: Jim Miller
Topic: 2839 Message: 2841

i played around with the horizontal surface tapper approach long enough to decide i didn't like it.

the problem is that your fingers always want to relax to the point that they fall on the sensing surfaces.

it does make for a nice integration however and probably is adequeate for short qsos after some practice.

i've now settled on more conventional vertical paddle arrangement but still with touch keying.

73

jim ab3cv

2842. RE: [AT_Sprint] Wild untamed parts

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-16 18:19:52 UTC
From: Dale Putnam
Topic: 2835 Message: 2842

Steve, You have a deal, I put a rope on each one left, and they are tied off to the hitchin post in the middle of the corral... for now. I only have a half doz resistors left to do.. so maybe they won't get too riled up...
Thank you,
Dale --... ...--Dale - WC7S in Wy

To: AT_Sprint@yahoogroups.comFrom: kd1jv@...: Sat, 15 Mar 2008 19:12:19 -0500Subject: Re: [AT_Sprint] Wild untamed parts

Dale,I'll send you another 270 ohm resistor. Just try not to loose any moreparts before I leave for 2 months on the 27th!72,Steve, KD1JV"Melt Solder"White Mountains of New Hampshirehttp://kd1jv.qrpradio.com

_____
Connect and share in new ways with Windows Live.
http://www.windowslive.com/share.html?ocid=TXT_TAGHM_Wave2_sharelife_012008

2843. RE: [AT_Sprint] Wild untamed parts

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-16 18:41:53 UTC
From: Dale Putnam
Topic: 2835 Message: 2843

Hi Steve,
Just completed a fix for Paypal, but have one question, for the filter board for 30m in c8F, is it really there?
It is in the chart on page 20, but not in the parts list on pg 27... or am I mixing things up? doesn't seem that it should be there... Oh, this is a III.
Thanks again for the help, and the little flying wild thing.
Have a great trip, and you don't have to send that resistor any fast way, reg postage will be fine... --... ...--Dale - WC7S in Wy

To: AT_Sprint@yahoogroups.comFrom: kd1jv@...ia.netDate: Sat, 15 Mar 2008 19:12:19 -0500Subject: Re: [AT_Sprint] Wild untamed parts

Dale,I'll send you another 270 ohm resistor. Just try not to loose any moreparts before I leave for 2 months on the 27th!72,Steve, KD1JV"Melt Solder"White Mountains of New Hampshirehttp://kd1jv.qrpradio.com

_____
Climb to the top of the charts! Play the word scramble challenge with star power.
http://club.live.com/star_shuffle.aspx?icid=starshuffle_wlmailtextlink_jan

2844. RE: [AT_Sprint] Re: Wild untamed parts

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-16 19:05:03 UTC
From: Dale Putnam
Topic: 2835 Message: 2844

I have a containment pan, but with an anti slide mat on the inside.. keeps the bounce down. Parts tend to be contained and lit where they hit. One could do the same thing with a mouse pad... anti static mat or the sticky mat draw inserts. --... ...--Dale - WC7S in Wy

To: AT_Sprint@yahoogroups.comFrom: list2@...: Sat, 15 Mar 2008 09:46:28 -0500Subject: [AT_Sprint] Re: Wild untamed parts

Sorry for the blank previous post. Seems if you double click "reply" the next screen has "send" there and off it goes.In preparation for the creation of my ATS3b, I have procured a 12x24 inch static mat and I just bought a bare metal 105."x15.4" Enchilada pan (I guess thats what they call a cake pan in Texas). I am assuming that the anti-part-deflection-containment-vessel cake pan goes on top of the static mat. Any suggestions?Thanks,Steve, W2MY

_____
Climb to the top of the charts! Play the word scramble challenge with star power.
http://club.live.com/star_shuffle.aspx?icid=starshuffle_wlmailtextlink_jan

2845. RFTB - tonight!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-16 23:31:18 UTC
From: Larry Makoski W2LJ
Topic: 2845 Message: 2845

The March Run for the Bacon is tonight; and I apologize for the short notice! I just now realized today is the 3rd Sunday of the month!

Sunday night - March 16th from:
9 - 11 PM EDT
8 - 10 PM CDT
7 - 9 PM MDT
6 - 8 PM PDT

This is a 2 hour, fun filled, friendly QRP CW contest open to ALL radio amateurs. Membership in the Flying Pigs QRP ARCI is not required. For the scoop on the details, please go to:

http://www.gentzow.com/fpqrp/fpqrprun.php

This month, in addition to the normal certificates, there WILL BE A 1ST PLACE PRIZE !!!! This month's top place scorer (who has not qualified for winning a prize so far in 2008) will win a set of Flying Pigs coasters! You can quaff a few brews and prevent your beer glass/mug from damaging your table.

Please use the Autolog; and have your entry posted at no later than March 23rd.

Hope to catch you on the bands; and good luck to all!

73 de Larry W2LJ
FP# 612

2846. Re: Tapper Keyer Sensitivity

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-17 00:09:12 UTC
From: kc7fys
Topic: 2839 Message: 2846

Like you gentlemen have discovered, and I concur: the tapper is a nice addition to the ATS3B--but in my case, too, I still like working a paddle for some reason. Having the touch pads does add another option that I appreciate having.

Nice for demonstrating the rig to non-hams and just in case other options don't work out.
Jonathan

--- In AT_Sprint@yahoogroups.com, "Jim Miller" <jim@...> wrote:
>
> i played around with the horizontal surface tapper approach long enough to
> decide i didn't like it.
>
> the problem is that your fingers always want to relax to the point that they
> fall on the sensing surfaces.
>
> it does make for a nice integration however and probably is adequeate for
> short qsos after some practice.
>
> i've now settled on more conventional vertical paddle arrangement but still
> with touch keying.
>
> 73
>
> jim ab3cv
>

2847. Run for the Bacon, 3/16/2008, 6:00 pm

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-17 00:41:52 UTC
From: AT_Sprint@yahoogroups.com
Topic: 2847 Message: 2847

Reminder from: AT_Sprint Yahoo! Group
http://groups.yahoo.com/group/AT_Sprint/cal

Run for the Bacon
Sunday March 16, 2008
6:00 pm - 8:00 pm
(This event repeats every month on the third Sunday.)
Location: Your shack or anywhere

Notes:
This Sunday evening, the Flying Pigs Amateur Radio Club International will be holding its monthly Run For The Bacon. This is a friendly, two hour QRP CW Sprint, which is open to ALL radio amateurs, will last from 9:00 - 11:00PM EDT (0200-0400 UTC Monday).

You may work stations once per band on 160, 80, 40, 20, 15 or 10 Meters. Suggested starting frequencies are 1.812, 3.562, 7.044, 14.062, 21.062, and 28.062 MHz.

The exchange is RST, S/P/C (State, Province, Country) and Flying Pigs membership number. If you're not a member of the Flying Pigs, and would like to be; then please cli

All Rights Reserved
Copyright ? 2008
Yahoo! Inc.
http://www.yahoo.com

Privacy Policy:
http://privacy.yahoo.com/privacy/us

Terms of Service:
http://docs.yahoo.com/info/terms/

2848. NAQCC Sprint Wednesday night!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-18 01:13:29 UTC
From: Larry Makoski W2LJ
Topic: 2848 Message: 2848

This coming Wednesday evening will be the monthly NAQCC Sprint for March, 2008.

I will refer you to the proper URL:

http://www.arm-tek.net/~yoel//sprint200803.html

There you will find all the details as to time, frequencies, this month's Special Award, which will be dedcated to those of us who use indoor antennas

This is a monthly event that caters to the CW veteran, the CW newcomer, straight key and bug fans. All are welcome to participate; but you must use QRP power levels to compete for awards.

Come join us and have a real good time!

73 de Larry W2LJ
NAQCC #035

2849. Re: [AT_Sprint] Dead Bee

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-18 17:17:01 UTC
From: Full Some
Topic: 2833 Message: 2849

--- kc7fys <kc7fys@...> wrote:

> Hm. OK, well, while working on a sort of prototype
> of JN1GLB's Altoids
> PA (beta version of assembly manual and READ_ME in
> files section), I
> went to hook up my 3B and noticed something odd--no
> output.
> My WM-2 needle will barely move on transmit (9.2V
> power in) on the
> most sensitive mW setting, and the computer part of
> it functions
> right, scrolling through functions and whatnot,
> keyer works and
> paddles work--but basically ZERO joy on transmit. It
> worked before and
> I was able to tweak up to about 4.7watts out on all
> bands.
> Waaaa. What should I be checking first? Connections
> look good. If I'm
> not mistaken, a load mismatch would trip the
> protection circuit,
> right? So my finals wouldn't be toasted (how do I
> check that?)
> Tips please,
> Jonathan
>
>
Jonathan

A similar situation occurred with by ATS III -
everything worked but low output (less than 200mw). I
traced it down to my power supply (6 AAA NiMHi).
Although the voltage was just above 6v, there was not
enough amperage. Check your dc input re: voltage and
amperage. I assume that your previous 4.7 watts
output was at 12v and not 9.2v.

Looking for last minute shopping deals?
Find them fast with Yahoo! Search.
http://tools.search.yahoo.com/newsearch/category.php?category=shopping

2850. Terrific service, enjoy the trip

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-19 06:15:22 UTC
From: pswarman
Topic: 2850 Message: 2850

ATS3B Ordered 13th March, Posted 14th March, Received at home in England 18th March with no customs to pay. Really great service Steve, thanks and enjoy your trip. I like the boards, great quality, I going to enjoy this and will review the groups tips before starting. Paul, G0odp

2851. Re: [AT_Sprint] Band Filter Question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-19 17:48:42 UTC
From: Bill Miner
Topic: 2850 Message: 2851

I just received my ATS 3B kit from Steve. Believe it or not I took the time to read through the Assembly Manual BEFORE starting this project.

I am confused about some steps in the "Band filter test and adjustment" section: Step 3 says to remove the green trimmer caps from the bottom of the board and relocate to the top of the board. Why would they be installed on the bottom? And why would I want to move them? Is it necessary to mount them on the bottom for alignment and then move them to the top (component) side of the board after alignment?

Then in step 10, it talks about moving the coils to the top of the board. Is it because there is no other way to access the adjustments when the band filter is installed on the main board? It seems like the components are facing the main board and not accessible when the board is plugged in. Is this correct?

Does anyone have an idea for a better case then the Altoids? Something strong but light?

Any other hints or tips greatfully accepted.

Thanks & 73, Bill - K6WLM

Looking for last minute shopping deals? Find them fast with Yahoo! Search.

2852. Re: [AT_Sprint] Band Filter Question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-19 19:15:26 UTC
From: Michael Harnage
Topic: 2850 Message: 2852

Some of the kits went out with trimmer top access trimmer caps instead of bottom access caps. If you have bottom access caps install on top of board so that you can trim thru the hole in the bottom. If you can top access caps you can bend the tabs and install as if it were bottom access or do as the manual says.

Personally, I put the coils on the top and simply pull the whole board, adjust, reinstall the filter board. Repeat as necessary. Power can remain on, JUST DON'T TRANSMIT WHILE THE BOARD IS PULLED! :)

Cases: I've done about everything one can think of for cases and have come to the conclusion that this rig must live in an Altoids sized tin. Can of spray paint will liven it up if you prefer. Bout the only thing better is the aluminum case from < http://americanmorse.com/aa1.htm >, but it is heavier and more expensive.

-mike/w1mt

--- Bill Miner <wg6h@...> wrote:

>
> I am confused about some steps in the "Band filter
> test and adjustment" section: Step 3 says to remove
> the green trimmer caps from the bottom of the board
> and relocate to the top of the board. Why would
> they be installed on the bottom? And why would I
> want to move them? Is it necessary to mount them on
> the bottom for alignment and then move them to the
> top (component) side of the board after alignment?
>
> Then in step 10, it talks about moving the coils
> to the top of the board. Is it because there is no
> other way to access the adjustments when the band
> filter is installed on the main board? It seems like
> the components are facing the main board and not
> accessible when the board is plugged in. Is this
> correct?
>
> Does anyone have an idea for a better case then
> the Altoids? Something strong but light?
>

Looking for last minute shopping deals?
Find them fast with Yahoo! Search.
http://tools.search.yahoo.com/newsearch/category.php?category=shopping

2853. Almost ready to head out

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-19 20:11:30 UTC
From: Steven Weber
Topic: 2835 Message: 2853

Got almost everything ready to head out on the Appalachian Trial in a week or so for a 2 month, 1000 mile treck. (if all goes well) I'm shipping all my hiking gear down to my folks house in Florida, where I'll vist for a few days before heading up to Georga, so it better all be ready by tonight!No way am I trusting my pack to the airlines!

I just finished fitting a battery charge indicator into the little solar charger gizmo. I was going to use a MPS430F2013 chip, but for the life of me, could not figure out how to use the A/D converter in that part! They made it way too complicated to use. So, I ended up using an Atmel Tiny15L, which was much easier to configure.

I tired to interface a Bluetooth headset into my ATS-3B so could have wireless connection between the rig and PDA. It worked, but with the headset mounted inside the tin with the rig, the headset was causing all kinds of interferance to the Bee. I could make most of it go away by putting my fingure over the headset antenna, but in the end I decided it was more trouble than it was worth, extra battery consumption and all.

Then I figured out a way to mount a cheap earbud speaker over the mic in the PDA just by using some rubber bands to hold it in place. Then I clipped off the other ear bud and wired up a plug with the interface resistors and cap inside the plug barrel to plug into the PDA headphone jack. Finally, I mounted and wired up a sperate stereo jack inside the Bee tin for the PDA interface cable to plug into.

Because the earbud is tightly coupled to the mic input on the PDA, I reduced the audio level by putting a 51 ohm resistor in series with the earbud. This is still a little too much audio, but by plugging in another set of headphones into the Bee's headphone jack, that brings the level down to be just perfict. Plus I can hear whats going on. A side benifit of freeing up the headphone jack by adding a dedicated digital interface jack :-)

I'm hoping working PSK on the trail will be easier than Morse. I won't have to concentrate as much and most of the QSO can be set up as macros.

It is hard to say when or how often I will actually get on the air. There are too many variables. I have to tent when I want to operate, as there is too much activity going on in and around the shelters.

When I do get on, it will most likely be around local dusk. All the camp chores are done by then and then a few quick QSO's before it gets dark enough to go to sleep. I'll try to be in a place I can operate from for the Spartin Sprint on April 7th.

Finally, like last year, I will have an on line trail journal going at www.trailjournals.com under the trail name "Slo-go'en".

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2854. Re: [AT_Sprint] Band Filter Question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-19 20:29:52 UTC
From: Steven Weber
Topic: 2850 Message: 2854

In the second run of -3B kits, I had to use top adjust trimmers as the bottom adjust were not available at the time. Apprently, they were switching the inventory to lead free types and I needed them right at the transission. The old ones were all gone and the new ones were still being made.

For this third run, the bottom adjust type were available again, so were used. I thought I removed all references to the top adjust ones in the run 3 manual, unless your not looking at the manual on the CD but an older one from the files section of this group. Since there can be suttle differences between the different runs of kits, you should always use the manual supplied with the kit you get. I'll double check the run 3 manual to see if I forgot to remove those top adjust trimmer references. (might be in the adjustment instructions).

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2855. Re: [AT_Sprint] Band Filter Question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-19 20:58:34 UTC
From: Bill Miner
Topic: 2850 Message: 2855

Hello Mike,

Great info. Thanks!

I really like the looks of the AmericanMorse AA1 case. Yes it is a bit pricey but exactly what I had in mind.

73, Bill

Michael Harnage <w1mt@...> wrote:
Some of the kits went out with trimmer top access
trimmer caps instead of bottom access caps. If you
have bottom access caps install on top of board so
that you can trim thru the hole in the bottom. If you
can top access caps you can bend the tabs and install
as if it were bottom access or do as the manual says.

Personally, I put the coils on the top and simply pull
the whole board, adjust, reinstall the filter board.
Repeat as necessary. Power can remain on, JUST DON'T
TRANSMIT WHILE THE BOARD IS PULLED! :)

Cases: I've done about everything one can think of for
cases and have come to the conclusion that this rig
must live in an Altoids sized tin. Can of spray paint
will liven it up if you prefer. Bout the only thing
better is the aluminum case from <
http://americanmorse.com/aa1.htm >, but it is heavier
and more expensive.

-mike/w1mt

--- Bill Miner <wg6h@...> wrote:

>
> I am confused about some steps in the "Band filter
> test and adjustment" section: Step 3 says to remove
> the green trimmer caps from the bottom of the board
> and relocate to the top of the board. Why would
> they be installed on the bottom? And why would I
> want to move them? Is it necessary to mount them on
> the bottom for alignment and then move them to the
> top (component) side of the board after alignment?
>
> Then in step 10, it talks about moving the coils
> to the top of the board. Is it because there is no
> other way to access the adjustments when the band

> filter is installed on the main board? It seems like
> the components are facing the main board and not
> accessible when the board is plugged in. Is this
> correct?
>
> Does anyone have an idea for a better case then
> the Altoids? Something strong but light?
>

Looking for last minute shopping deals?
Find them fast with Yahoo! Search.
http://tools.search.yahoo.com/newsearch/category.php?category=shopping

----
Looking for last minute shopping deals? Find them fast with Yahoo! Search.

2856. Re: [AT_Sprint] Band Filter Question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-19 21:08:45 UTC
From: Bill Miner
Topic: 2850 Message: 2856

Steve,

Yes, I am using the docs from the enclosed CD. It is all pretty clear to me now so go pack your stuff and don't worry about it.

Have Fun!

73, Bill

Steven Weber <kd1jv@...> wrote:
In the second run of -3B kits, I had to use top adjust trimmers as the bottom adjust were not available at the time. Apprently, they were switching the inventory to lead free types and I needed them right at the transission. The old ones were all gone and the new ones were still being made.

For this third run, the bottom adjust type were available again, so were used. I thought I removed all references to the top adjust ones in the run 3 manual, unless your not looking at the manual on the CD but an older one from the files section of this group. Since there can be suttle differences between the different runs of kits, you should always use the manual supplied with the kit you get. I'll double check the run 3 manual to see if I forgot to remove those top adjust trimmer references. (might be in the adjustment instructions).

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

Never miss a thing. Make Yahoo your homepage.

2857. Re: [AT_Sprint] Terrific service, enjoy the trip

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-19 21:12:31 UTC
From: james.rushforth@tesco.net
Topic: 2850 Message: 2857

Hi Paul
Hope you have fun building the kit.
Interested you weren't charged by customs. Mine had a sticker on with £4.39 for VAT and an £8.00 handling charge. Total £12.39. This all seems a bit hit and miss as I have bought kits for more from the USA with no charge.
Having plenty of contacts with mine on 80 and 40 in the evening when the bands have closed down.
Jim G3ZPD (Cumbria)

---- pswarman <pswarman@...> wrote:
>ATS3B Ordered 13th March, Posted 14th March, Received at home in
>England 18th March with no customs to pay. Really great service Steve,
>thanks and enjoy your trip. I like the boards, great quality, I going
>to enjoy this and will review the groups tips before starting. Paul,
>G0odp
>

2858. RE: [AT_Sprint] Almost ready to head out

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-19 21:56:49 UTC
From: Dale Putnam
Topic: 2835 Message: 2858

sounds like an excersize of planning, and then... more excersize to fun.
Somewhat like going outfitting for an elk/deer/moose/antelope hunt in the Bridger-Teton Wilderness, but with horses. That was fun, and I am willing to be that this is fun too.
Good luck, and I'll be watching for you around your dusk.... can't do psk, yet, but on cw will bee a hoot. --... ...--Dale - WC7S in Wy

_____
Climb to the top of the charts! Play the word scramble challenge with star power.
http://club.live.com/star_shuffle.aspx?icid=starshuffle_wlmailtextlink_jan

2859. Re: Almost ready to head out

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-20 05:04:16 UTC
From: radio_kx0r
Topic: 2835 Message: 2859

--- In AT_Sprint@yahoogroups.com, Steven Weber <kd1jv@...> wrote:

Steve,

Just want to wish you lots of luck down south on the AT. I grew up in Knoxville, TN, and my first backpack was in the Smoky Mountains. I've spent maybe 10 or 12 days on the AT along the TN/NC border (yeasr ago). It's beautiful and hard. Up one mountain, down to a gap, and up another. Thousands of vertical feet - lots of it with few switchbacks. Awesome places - in many ways, wilder than out here.

Sooner or later you'll be thinking about bears and boars - hope they stay away from you. They used to have little signs right along the NC line that said "Bear Sanctuary"...

Don't forget to watch for copperheads and rattlers - the copperheads are hard to spot in the leaves if they lie still...plus lots of harmless snakes on the trails down there.

You're going on an amazing trip, whether you complete the 1000 miles or not. Everyone in this group should know that going more than a few days on the AT is a big deal...this is not car camping.

I've spent about 40 years out here in the West chuckling to myself about how much easier it is to go hiking and backpacking out here than back there. Enough said -

Hang in there, and wish you the best!

Remember the trillium - you will see many, and they may bring good luck. Lots of great radio sites along all those ridges!

72/73
Carey
KX0R

>
> Got almost everything ready to head out on the Appalachian Trial in a week
> or so for a 2 month, 1000 mile treck. (if all goes well) I'm shipping all
> my hiking gear down to my folks house in Florida, where I'll vist for a few
> days before heading up to Georga, so it better all be ready by tonight!No
> way am I trusting my pack to the airlines!
>

> I just finished fitting a battery charge indicator into the little
solar
> charger gizmo. I was going to use a MPS430F2013 chip, but for the
life of
> me, could not figure out how to use the A/D converter in that part!
They
> made it way too complicated to use. So, I ended up using an Atmel
Tiny15L,
> which was much easier to configure.
>
> I tired to interface a Bluetooth headset into my ATS-3B so could
have
> wireless connection between the rig and PDA. It worked, but with the
> headset mounted inside the tin with the rig, the headset was
causing all
> kinds of interferance to the Bee. I could make most of it go away by
> putting my fingure over the headset antenna, but in the end I
decided it
> was more trouble than it was worth, extra battery consumption and
all.
>
> Then I figured out a way to mount a cheap earbud speaker over the
mic in
> the PDA just by using some rubber bands to hold it in place. Then I
clipped
> off the other ear bud and wired up a plug with the interface
resistors and
> cap inside the plug barrel to plug into the PDA headphone jack.
Finally, I
> mounted and wired up a sperate stereo jack inside the Bee tin for
the PDA
> interface cable to plug into.
>
> Because the earbud is tightly coupled to the mic input on the PDA, I
> reduced the audio level by putting a 51 ohm resistor in series with
the
> earbud. This is still a little too much audio, but by plugging in
another
> set of headphones into the Bee's headphone jack, that brings the
level down
> to be just perfict. Plus I can hear whats going on. A side benifit
of
> freeing up the headphone jack by adding a dedicated digital
interface jack :-)
>
> I'm hoping working PSK on the trail will be easier than Morse. I
won't have
> to concentrate as much and most of the QSO can be set up as macros.
>
> It is hard to say when or how often I will actually get on the air.

There
> are too many variables. I have to tent when I want to operate, as
there is
> too much activity going on in and around the shelters.
>
> When I do get on, it will most likely be around local dusk. All the
camp
> chores are done by then and then a few quick QSO's before it gets
dark
> enough to go to sleep. I'll try to be in a place I can operate from
for the
> Spartin Sprint on April 7th.
>
> Finally, like last year, I will have an on line trail journal going
at
> www.trailjournals.com under the trail name "Slo-go'en".
>
>
> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com
>

2860. Re: Band Filter Question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-20 05:22:50 UTC
From: radio_kx0r
Topic: 2850 Message: 2860

--- In AT_Sprint@yahoogroups.com, Bill Miner <wg6h@...> wrote:

Bill,

Since you have the correct trimmers, you just mount them all where they belong on the little band modules.

I spent some extra time working on mine - I have both the ATS-3A and ATS-3B rigs, and I set them both up for 5W at 12V.

I posted detailed instructions on some mods to optimize these modules, along with the pros and cons. They're in the FILES section of this group site. The stock rig needs a few tweaks to give 5W on every band, but it can do this. I use my -B for portable work at campsites and in the local forests, as well as at home, and I've had no problem running 5W. Usually I'll operate on several bands with one antenna.

My story: always use a tuner, use a tuner with an absorptive bridge, and use a current limiting resistor in series with the battery to limit current during tuneup. If you run 5W, you'll probably want to increase the current limit on the rig by about 10% to avoid tripping while running at full power.

The ATS-3B is an amazing radio. Its full capabilities are sleeping now, waiting for some solar activity to heat up the upper frequencies...

There's a lot of information on this site - use the search features to find posts on key topics. Many of us have posted stuff while we built our kits.

Good luck

72/73
Carey Fuller
KX0R

>
> I just received my ATS 3B kit from Steve. Believe it or not I took the time to read through the Assembly Manual BEFORE starting this project.
>
> I am confused about some steps in the "Band filter test and adjustment" section: Step 3 says to remove the green trimmer caps from the bottom of the board and relocate to the top of the board. Why would they be installed on the bottom? And why would I want to

move them? Is it necessary to mount them on the bottom for alignment and then move them to the top (component) side of the board after alignment?
>
> Then in step 10, it talks about moving the coils to the top of the board. Is it because there is no other way to access the adjustments when the band filter is installed on the main board? It seems like the components are facing the main board and not accessible when the board is plugged in. Is this correct?
>
> Does anyone have an idea for a better case then the Altoids? Something strong but light?
>
> Any other hints or tips greatfully accepted.
>
> Thanks & 73, Bill - K6WLM
>
>
> ---
> Looking for last minute shopping deals? Find them fast with Yahoo! Search.
>

2861. Re: [AT_Sprint] Re: Band Filter Question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-20 14:39:37 UTC
From: Hank Greeb
Topic: 2850 Message: 2861

Carey:

I'm planning to get one of the 3b kits when Steve returns from his hike. I'd plan to use 3 lithium ion (lithium polymer) cells in series, for 11.1 volts. Did you do a power check @ 11 volts? I know these things don't put out as much power at lower voltages as they do with 12 volts, but Li-ION or Li-Polymer have a much better power/weight ratio.

Right now I'm just curious.

72/73 de n8xx Hg

radio_kx0r wrote:
> --- In AT_Sprint@yahoogroups.com, Bill Miner <wg6h@...> wrote:
>
> <snip>
>
> I spent some extra time working on mine - I have both the ATS-3A and
> ATS-3B rigs, and I set them both up for 5W at 12V.
>
> <snip>
>

2862. Re: [AT_Sprint] Re: Band Filter Question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-20 15:31:53 UTC
From: Michael Harnage
Topic: 2850 Message: 2862

I tweak mine to give abt 2w at 9v and 4.5w at 11.1v. I
too like the 3 cell lipo packs.

-mike/w1mt

--- Hank Greeb <n8xx@...> wrote:

>
> Carey:
>
> I'm planning to get one of the 3b kits when Steve
> returns from his
> hike. I'd plan to use 3 lithium ion (lithium
> polymer) cells in series,
> for 11.1 volts. Did you do a power check @ 11
> volts? I know these
> things don't put out as much power at lower voltages
> as they do with 12
> volts, but Li-ION or Li-Polymer have a much better
> power/weight ratio.
>

Looking for last minute shopping deals?
Find them fast with Yahoo! Search.
http://tools.search.yahoo.com/newsearch/category.php?category=shopping

2863. Re: [AT_Sprint] Re: Almost ready to head out

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-20 19:13:34 UTC
From: Steven Weber
Topic: 2835 Message: 2863

>Just want to wish you lots of luck down south on the AT.

Carey,

Thanks. This will be my 2nd or 3d time hiking these sections of trial, so getting pretty familer with them.

Most of the shelters in NC now have effective food bear bagging setups, so bears are not encountered very often anymore. The Smokies used to have some bad bear/boar problems, but these are much less today. Open dumps and tourists feeding bears are a thing of the past and there has been a boar erratication program going on for some time in the park. I'm planing on taking an alturnative route though the Smokies, going around through the lower valleys on the east side instead of up on the high ridge, so I might have more animal encounters than others. I've never been in that part of the park before, so it should be interesting.

Its still early enough in the season down south and the trail is high enough that snakes are not a problem either. Still too cold for them. I saw a lot of rattle snakes in PA on last years trip. Usually in the morning, laying across the trail in a patch of sun trying to warm up. I would simply step over them and they would pay me no heed.
72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

2864. Re: Almost ready to head out

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-21 23:13:20 UTC
From: radio_kx0r
Topic: 2835 Message: 2864

Steve,

Thanks for the good news and update! You should have a great time. The east side of the Smokies should be interesting - I've never been in there - I know it's pretty wild.

Best of luck - hope some of us can contact you. Please comment in your trail journal if you're going to be working CW and when!

Thanks

72/73

> Carey,
>
> Thanks. This will be my 2nd or 3d time hiking these sections of trial, so
> getting pretty familer with them.
>
> Most of the shelters in NC now have effective food bear bagging setups, so
> bears are not encountered very often anymore. The Smokies used to have
> some bad bear/boar problems, but these are much less today. Open dumps and
> tourists feeding bears are a thing of the past and there has been a boar
> erratication program going on for some time in the park. I'm planing on
> taking an alturnative route though the Smokies, going around through the
> lower valleys on the east side instead of up on the high ridge, so I might
> have more animal encounters than others. I've never been in that part of
> the park before, so it should be interesting.
>
> Its still early enough in the season down south and the trail is high
> enough that snakes are not a problem either. Still too cold for them. I saw
> a lot of rattle snakes in PA on last years trip. Usually in the morning,
> laying across the trail in a patch of sun trying to warm up. I would simply
> step over them and they would pay me no heed.

> 72,
> Steve, KD1JV
> "Melt Solder"
> White Mountains of New Hampshire
> http://kd1jv.qrpradio.com
>

2865. ATS-3A Filter Module Improvements

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-23 05:19:55 UTC
From: radio_kx0r
Topic: 2865 Message: 2865

After I built my ATS-3A some time ago, I made a few changes to the filter modules to get a little more power out. I run mostly on 3 lithium-ion cells near 12V, and I want - and get - 5W output at full charge. These changes have worked well, and I finally got around to documenting them today - "better late than never".

I posted the pdf document in the FILES section of this site. Another similar document (posted last year) describes my changes for the "B" - they're similar.

Late last year, after adjusting all the filter modules in my "B", I took another look at the receiver input tuned circuits in my "A" modules. I was able to fix a couple of situations where a trimmer was tuned at its limit (not peaked); I also improved the sensitivity on each band.

Some of you may want to look over this list of "what works for me". You can definitely make your rig a little hotter on both receive and transmit, once everything is tuned up just right. All this stuff is easy to do, unless your toroids are covered in epoxy! Please read my warnings and guidelines first! Steve's recommendations in the ATS-3A manual result in good, conservative performance, and there are risks in messing around with these delicate little filter modules. I've added comments for each band. Changes are shown in RED. Remember that you need to adjust your transmit toroids (LF1 and LF2) by compressing or stretching the windings each time you change a part of that tuned circuit. You may need several iterations to get things just right...go slow and be patient.

Don't try to get more than 5W output, even though you can. Use a tuner with a resistive bridge, and always run into a good match. Don't run on more than 12V. I've never blown the finals in my "A" or my "B", but we've been warned...

If anyone finds a problem here, please post it to the group, and I'll try to help.

72/73

Carey Fuller
KX0R

2866. Altoids tins for sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-28 15:00:41 UTC
From: shadle
Topic: 2866 Message: 2866

I have a whole mess of Altoids tins for sale of various sizes and types. They are excess to my needs and frankly taking up a bit of space that is at a premium at this point in my life. Most are of the typical size that you would find at your local drug store/grocery; however, I do have one larger tin, a couple smaller tins, and a Sucrets tin or two.

There are over 40 tins (probably close to 45 or so). If you are interested in the entire set then I would be willing to part with them all gladly for $25 + shipping of your choice (Priority Mail, UPS, etc.).

Thanks for your attention.
-john W4PAH

2867. introduction

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-30 00:55:51 UTC
From: Paul Huff
Topic: 2867 Message: 2867

Hello everyone,

I just joined this group and would like to introduce myself. My name is Paul Huff, N8XMS, and I live in Livonia, MI which is near Detroit. I operate about 99% QRP CW and probably enjoy building gear as much as using it. I have previously built a number or QRP rigs including a homebrew 40-meter transmitter, TenTec 1320, Wilderness SST-40, Elecraft K1 and KX1, Rockmite 30, Himite 17, and assorted accessories. I am hoping to build an ATS-3B once the next batch of kits becomes available. I'm a little nervous about all of the SMT but I built a NorCal SMT dummy load for practice and that turned out fine so I hope that I am ready for the ATS-3B. I will probably be calling on the collective wisdom of the group from time to time and thank all of you in advance for any advice and help that you can offer.

73,
Paul - N8XMS

2868. Re: introduction

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-30 03:39:19 UTC
From: radio_kx0r
Topic: 2867 Message: 2868

--- In AT_Sprint@yahoogroups.com, "Paul Huff" <phuff@...> wrote:

Paul,

Welcome to the group! You're the right guy for the ATS-3B. Be sure to watch this site for a chance to order your kit. Right now Steve Weber is on an expedition on the southern AT. When he returns in two or three months, he may offer more ATS-3B kits - that's my understanding.

This kit will be a fun challenge for someone who has built so many interesting kits. Most of us have found that the SMT assembly isn't too hard.

As you may know, there are two general ways to do SMT assembly in a hobby setting. One method is to solder each part with a pointed soldering tip and small solder, one joint at a time. The other method is to place all the parts on the board using solder paste, tweezers, and a syringe, and then use a hot air tool to reflow the solder.

Many ATS rigs have been built with the first method, and they work just fine. I built my ATS-3A that way. When the ATS-3B came along, there were postings here about using Cash Olson's solder paste and the hot air reflow method shown on his website. Check this out if you haven't already seen it:

http://www.zianet.com/erg/SMT_Soldering.html

Be sure to view the movies.

There were other methods suggested, many of them crude - like toaster ovens. Many of us have used the Cash Olson method successfully, and the results look like they came from a contract assembly house.

This AT Sprint website here has some nice resources for you - in the PHOTOS section are many photos of ATS rigs, cases, accessories, etc. In the FILES section are documents, complete manuals, schematics, test data, and firmware code. If you sign up, you can share in this and contribute to the group.

I posted a bunch of stuff about the hot air method, and so did several others - we were "blown away" by this nice experience. If you use the SEARCH function for the postings here, you can easily go back and read whatever you want. The search feature makes it easy to find the many comments and suggestions we wrote when we were building our kits and sharing our challenges.

In particular, Steve Weber has posted some important, articulate messages related to particular issues - assembly as well as circuit behavior. There also is a lot of material about the digital mode capability of the "B" rig.

Right now this site is pretty dead, since most of us built our kits some time ago, and Steve's out on the trail. If Steve does another run of kits, there will be more activity here.

You can download the ATS-3B manual in the FILES here, if you don't already have it.

I think the ATS-3B is one of the most amazing ham radio kits ever sold. The rig does what it should. If you get a chance to take it out in the woods or camping somewhere, with a good antenna and your BLT, you'll find out that it's a real radio, designed mainly for small, lightweight performance. It can run on whatever bands are available, you can ragchew forever, and you can work DX.

Hope you have as much fun as we have had...

72/73

Carey
KX0R

> Hello everyone,
>
> I just joined this group and would like to introduce myself. My name is
> Paul Huff, N8XMS, and I live in Livonia, MI which is near Detroit. I
> operate about 99% QRP CW and probably enjoy building gear as much as using
> it. I have previously built a number or QRP rigs including a homebrew
> 40-meter transmitter, TenTec 1320, Wilderness SST-40, Elecraft K1 and KX1,
> Rockmite 30, Himite 17, and assorted accessories. I am hoping to build an
> ATS-3B once the next batch of kits becomes available. I'm a little nervous
> about all of the SMT but I built a NorCal SMT dummy load for practice and
> that turned out fine so I hope that I am ready for the ATS-3B. I will
> probably be calling on the collective wisdom of the group from time to time
> and thank all of you in advance for any advice and help that you can offer.
>
> 73,
> Paul - N8XMS

>

2869. Beverage warmer method and the two sided board??

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-30 12:24:07 UTC
From: James McKinley
Topic: 2869 Message: 2869

GM Carey,
I have to ask this agn as I'm sure it's been asked before. Can you do a board that has parts on both sides using the hot plate and air gun? It would seem that the parts would lay directly on the warmer and not the board. Would this be a problem and also change the sequence of parts placement during construction?

Thanks,
Jim WD4OJY

Never miss a thing. Make Yahoo your home page.
http://www.yahoo.com/r/hs

2870. Re: [AT_Sprint] Beverage warmer method and the two sided board??

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-30 16:04:13 UTC
From: Bill Noyce
Topic: 2869 Message: 2870

On Sun, Mar 30, 2008 at 8:24 AM, James McKinley <flyable2@...> wrote:

> I have to ask this agn as I'm sure it's been asked before. Can you do
> a board that has parts on both sides using the hot plate and air gun?

Yes, you certainly can. I built my ATS-3B that way, as have many others.

Place all the parts on one side (I think I chose the less-populated
side), and cook that one.
(Note that the beverage warmer just makes the board warm -- less than
100 Celsius --
to reduce thermal shock as the embossing tool melts the solder. It
also allows the
board to cool more slowly.)

Then place the parts for the other side.
When cooking this side, you can space the board away from the beverage warmer.
I think I had soldered on the mounting spacers for this, but you could
just lay it on some
nuts. The parts on the bottom only get warm, not hot, because the hot
air doesn't reach them.
Even if their solder did melt, surface tension would hold the parts in
place (so even the
toaster-oven method can work, apparently).

It's a litltle nerve-wracking to have ~100 parts on the board just
held with wet solder paste.
I bumped a few one time, but it wasn't hard to put them back. Just
find a time where you can
concentrate on the job and get a whole side done, and keep the cat out
of the room!

Good luck,
-- Bill, AB1AV

2871. RE: [AT_Sprint] introduction

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-30 17:30:19 UTC
From: Dale Putnam
Topic: 2867 Message: 2871

Welcome to the group Paul, it is a nifty group to join. I am building a III now, and will start a B... in a few weeks... am putting together a vacation rig to carry with.
If you want to get started before Steve gets back, post a WTB, and one might just pop outta the woodwork...
And the AT is a fun rig to do the fox hunts with too.. 80/40 or 20. Great for the Sprints too, and grand fun in state qso parties. --... ...--Dale - WC7S in Wy

_____
Windows Live Hotmail is giving away Zunes.
http://www.windowslive-hotmail.com/ZuneADay/?locale=en-US&ocid=TXT_TAGLM_Mobile_Zune_V3

2872. Re: Beverage warmer method and the two sided board??

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-30 17:40:51 UTC
From: radio_kx0r
Topic: 2869 Message: 2872

--- In AT_Sprint@yahoogroups.com, "Bill Noyce" <WBNoyce@...> wrote:

Jim and Bill,

Bill covered this good question just fine. I hot-air-soldered both sides of my ATS-3B using a modified candle warmer for the preheat, and an embossing tool for the hot air. If you search for the phrases "candle warmer","hot air",and "embossing" on this site, you can find most of what's been written here earlier. The basic idea is that I used aluminum plates to expand the candle warmer's surface and even out the heat. The only problem with the alumimum plate is that it takes a long time to heat up. See my picture in the PHOTOS section here.

To lift the board with already-soldered parts slightly off the hot plate, I just put quarters under the corners. Nuts would be great also. The hot air embossing tool won't melt the solder joints of parts on the underside, as long as you don't have it too close for too long.

The toaster oven isn't a good tool for soldering, because you don't have the close control and visual feedback that you do when working with a hot air tool. It would be easy to overheat and damage the board with a toaster oven. It has a very high level of infrared radiation, which tends to overheat the darker parts, like your IC's. It's designed for toasting bread and cooking food quickly, not for reflow soldering. Remember that what you're trying to do is duplicate the thermal profile recommended for the solder paste, and a toaster oven holds the temperature too high for too long.

I had the same problem with bumping parts held on by paste that seemed to be drying out, and agree with everything Bill said. It's probably OK to use hot air to solder the board in sections - others have done this. Remember that you have to do a close inspection and correct any problems after you're done. Use small desoldering braid and a fine point iron to rework any joints that aren't right. This isn't as hard as it sounds. Remember when you first learned to solder?

72/73

Carey
KX0R

> On Sun, Mar 30, 2008 at 8:24 AM, James McKinley <flyable2@...>
wrote:
>

> > I have to ask this agn as I'm sure it's been asked before.
Can you do
> > a board that has parts on both sides using the hot plate and air
gun?
>
> Yes, you certainly can. I built my ATS-3B that way, as have many
others.
>
> Place all the parts on one side (I think I chose the less-populated
> side), and cook that one.
> (Note that the beverage warmer just makes the board warm -- less
than
> 100 Celsius --
> to reduce thermal shock as the embossing tool melts the solder. It
> also allows the
> board to cool more slowly.)
>
> Then place the parts for the other side.
> When cooking this side, you can space the board away from the
beverage warmer.
> I think I had soldered on the mounting spacers for this, but you
could
> just lay it on some
> nuts. The parts on the bottom only get warm, not hot, because the
hot
> air doesn't reach them.
> Even if their solder did melt, surface tension would hold the parts
in
> place (so even the
> toaster-oven method can work, apparently).
>
> It's a litltle nerve-wracking to have ~100 parts on the board just
> held with wet solder paste.
> I bumped a few one time, but it wasn't hard to put them back. Just
> find a time where you can
> concentrate on the job and get a whole side done, and keep the cat
out
> of the room!
>
> Good luck,
> -- Bill, AB1AV
>

2873. Re: [AT_Sprint] Re: Beverage warmer method and the two sided board??

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-30 18:09:34 UTC
From: john
Topic: 2869 Message: 2873

At 01:40 PM 3/30/2008, radio_kx0r wrote:
>--- In AT_Sprint@yahoogroups.com, "Bill Noyce" <WBNoyce@...> wrote:
>
> It has a very high level of infrared
>radiation, which tends to overheat the darker parts, like your IC's.
>It's designed for toasting bread and cooking food quickly, not for
>reflow soldering. Remember that what you're trying to do is
>duplicate the thermal profile recommended for the solder paste, and a
>toaster oven holds the temperature too high for too long.

I've wondered about this (granted I hand soldered my AT3B)...

Commercial reflow ovens are quite often IR, so that shouldn't be a problem. Likewise , toaster ovens have thermostats, so preheat should be quite doable. When it comes time to cool it off (after peak reflow temps are met....~240C) I'd think opening the oven door would serve as a fairly controllable cool down...certainly as or more controllable than with a hand held blower.

I know a lot of boards have been assembled with the hot plate and embosser, so I'm sure it works, but I still think there's some promise in the toaster oven method. :-)

John K5MO

2874. Re: [AT_Sprint] Re: Beverage warmer method and the two sided board??

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-30 21:27:18 UTC
From: Michael Harnage
Topic: 2869 Message: 2874

I have to give a positive plug for the toaster oven
method. I have used the toaster oven with great
success. Found it very easy to watch the process thru
the window and control the temperature with the
thermostat. I actually think it is easier to follow
the paste profile with an oven than with the hot air
method. Biggest issue with toaster ovens is that the
air flow is generally not very good and you should
look for a model that has convection, for better air
flow and more even board temperature.

That all being said, I actually prefer the hot air
method as I don't like getting the oven out for a few
minutes of work. :) Much easier to get the hot air gun
out for short term usage.

Either way is useful and a valuable tool in the
homebrewer's SMT toolkit.

-mike/w1mt

--- radio_kx0r <careyfuller@...> wrote:

>
> The toaster oven isn't a good tool for soldering,
> because you don't
> have the close control and visual feedback that you
> do when working
> with a hot air tool. It would be easy to overheat
> and damage the
> board with a toaster oven.

_____
OMG, Sweet deal for Yahoo! users/friends:Get A Month of Blockbuster Total Access, No Cost.
W00t
http://tc.deals.yahoo.com/tc/blockbuster/text2.com

2875. Orientation of 60 mHz clock chip on ATS3b?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-30 23:48:13 UTC
From: Steven Pituch
Topic: 2869 Message: 2875

I think it has a dot at the lower left corner when the text on it reads from left to right. I assume this dot goes in the upper left corner when soldering it to the board. Any comments?
Steve, W2MY

2876. Re: Orientation of 60 mHz clock chip on ATS3b?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-30 23:59:24 UTC
From: radio_kx0r
Topic: 2869 Message: 2876

--- In AT_Sprint@yahoogroups.com, "Steven Pituch" <list2@...> wrote:

Steve,

You are right about the 60 Mhz clock oscillator. When correctly installed, the little circular dot symbol will be at the corner near C58.

KX0R

> I think it has a dot at the lower left corner when the text on it reads from
> left to right. I assume this dot goes in the upper left corner when
> soldering it to the board. Any comments?
> Steve, W2MY
>

2877. Re: Beverage warmer method and the two sided board??

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-31 00:36:03 UTC
From: radio_kx0r
Topic: 2869 Message: 2877

--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:

Mike,

Your positive experience clearly exceeds my negative attitude toward the toaster oven! The toaster oven I have here has no fan, has a simple on-off thermostat, and uses about 1500 watts when the elements are on. I think it would take much practice - trial and error - to do a good soldering job with this appliance. Even for cooking it's pretty unpredictable. Your oven is clearly superior. With so many models available, generalizing on a soldering process isn't practical. I'm wrong to be so broadly negative - that's based on what I have here.

I know that the commercial reflow ovens, whether IR or convection, work just great. They have sensors and processors to get the profiles just right. The operators generally have a lot of experience, and they work hard to achieve tight process control in order to maximize yields.

I believe that the hot air method generally results in less thermal shock to the components than the soldering iron method. What do you think?

I'm aware of several instances of large ceramic capacitors (MLC chip caps) that were thermally shocked, eventually leading to failures of commercial equipment shipped to customers. Those failures were on boards that were manually soldered with irons, one end at a time. The failures took months to develop. When the capacitors finally shorted, they sometimes took the traces off the boards, because they were on a 50V rail with several amperes available. A very expensive problem for all concerned...

Maybe there is nothing to worry about with small chip caps from good manufacturers? My ATS-3A was hand-soldered, and it still works fine. Has anyone here had a failed chip cap yet?

72/73

Carey
KX0R

> I have to give a positive plug for the toaster oven
> method. I have used the toaster oven with great
> success. Found it very easy to watch the process thru
> the window and control the temperature with the
> thermostat. I actually think it is easier to follow

> the paste profile with an oven than with the hot air
> method. Biggest issue with toaster ovens is that the
> air flow is generally not very good and you should
> look for a model that has convection, for better air
> flow and more even board temperature.
>
> That all being said, I actually prefer the hot air
> method as I don't like getting the oven out for a few
> minutes of work. :) Much easier to get the hot air gun
> out for short term usage.
>
> Either way is useful and a valuable tool in the
> homebrewer's SMT toolkit.
>
> -mike/w1mt
>
>
>
> --- radio_kx0r <careyfuller@...> wrote:
>
>
> >
> > The toaster oven isn't a good tool for soldering,
> > because you don't
> > have the close control and visual feedback that you
> > do when working
> > with a hot air tool. It would be easy to overheat
> > and damage the
> > board with a toaster oven.
>
>
>

> OMG, Sweet deal for Yahoo! users/friends:Get A Month of Blockbuster
Total Access, No Cost. W00t
> http://tc.deals.yahoo.com/tc/blockbuster/text2.com
>

2878. Re: [AT_Sprint] Re: Beverage warmer method and the two sided board??

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-03-31 01:21:20 UTC
From: john
Topic: 2869 Message: 2878

At 08:36 PM 3/30/2008, you wrote:
>--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:
>
>Maybe there is nothing to worry about with small chip caps from good
>manufacturers? My ATS-3A was hand-soldered, and it still works
>fine. Has anyone here had a failed chip cap yet?

Chip caps have a much bigger issue with mechanical mistreatment (and it doesnt take much!). I'm a components engineer, and keeping designs free of large (1206 and larger) MLCCs that are near connectors, shear areas for depanelization, snap in fasteners, etc, is a constant battle. As you note, they make GREAT short circuits... when they do short.

John K5MO

2879. ATS3b Construction Pregress and Ques

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-02 15:15:29 UTC
From: Steven Pituch
Topic: 2869 Message: 2879

Hi all,
Just a few notes on my progress building the ATS3b. First, the Optivisor DA-7 (high magnification) I purchased by default has been quite good. My vision is quite poor. With my Varilux glasses I can't see close at all, but without them all I can see is the tip of my nose. The NA-7 is OK when used with my glasses, as is recommended. But when I use the NA-7 without my glasses the results are very nice. Yes, I am working about 3 inches from the circuit board, but when I need to see that 603 part, they are really nice. I was able to solder the U7 chip with a conical tip with no bridges first time, so something is working out.

My next question has to do with cleaning the board. I am using a lot of GC Liquid Soldering Flux. It was crusted onto everything. I have finished the caps, resistors and semi-conductors, and have cleaned the board twice using denatured alcohol and a flux brush and then tamping the board with paper towels. It is still a little bit dirty. Is there a spray or something that is more effective? Also I wonder if I can just wash it with some detergent and water. Thats why I haven't put the switches and LCD onto the board yet.

72,
Steve, W2MY

2880. Re: [AT_Sprint] ATS3b Construction Pregress and Ques

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-02 15:34:49 UTC
From: w9ya@qrparci.net
Topic: 2869 Message: 2880

Hey Steve and the gang;

I use the Chemtronics flux pens... both the no-clean and the rosin based products. The flux goes where I want it and I can control the amounts I am using.

They also make decent flux remover pens too. I seldom find a need to use anything else for either fluxing or cleaning. Occasionally I will follow up the cleaning with some water or and alcohol rinse.

Very best regards;

Bob
w9ya

> Hi all,
> Just a few notes on my progress building the ATS3b. First, the
> Optivisor DA-7 (high magnification) I purchased by default has been
> quite good. My vision is quite poor. With my Varilux glasses I can't
> see close at all, but without them all I can see is the tip of my nose.
> The NA-7 is OK when used with my glasses, as is recommended. But when
> I use the NA-7 without my glasses the results are very nice. Yes, I am
> working about 3 inches from the circuit board, but when I need to see
> that 603 part, they are really nice. I was able to solder the U7 chip
> with a conical tip with no bridges first time, so something is working
> out.
>
> My next question has to do with cleaning the board. I am using a lot of
> GC Liquid Soldering Flux. It was crusted onto everything. I have
> finished the caps, resistors and semi-conductors, and have cleaned the
> board twice using denatured alcohol and a flux brush and then tamping
> the board with paper towels. It is still a little bit dirty. Is there
> a spray or something that is more effective? Also I wonder if I can
> just wash it with some detergent and water. Thats why I haven't put
> the switches and LCD onto the board yet.
>
> 72,
> Steve, W2MY

Liviu Librescu - ?n veci pomenirea lui.
(May his memory be eternal.)

2881. QRL?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-03 20:45:48 UTC
From: kc7fys
Topic: 2881 Message: 2881

I usually don't do this, but I'm on 7.040 now in Saint Paul, MN,
hoping for an opening to Cedar Rapids, IA. If you are just sitting
around, could I get an RST from anyone who hears and gets this message?
Jonathan KC7FYS/0

2882. An extra D1?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-04 19:39:37 UTC
From: Dale Putnam
Topic: 2882 Message: 2882

I'm looking for an extra D1 that is used in the AT series radios. Does anyone have an extra or could make a recommend as to who might have them? It is the polarity protection diode. Thanks,
--... ...--Dale - WC7S in Wy

_____
Going green? See the top 12 foods to eat organic.
http://green.msn.com/galleries/photos/photos.aspx?gid=164&ocid=T003MSN51N1653A

2883. Reference Oscillator Frequency Calibration Procedure ATS3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-05 01:13:11 UTC
From: Steven Pituch
Topic: 2883 Message: 2883

Hi All,
I am not sure about how to do this procedure, using my transceiver.

"Reference Oscillator Frequency Calibration
This calibration is most easily done with an accurate frequency counter. If you do not have access to one, but do
have a rig with general coverage, good calibration and can tune to 10 MHz, then you can use that. If you can
connect up a PSK program or other audio spectrum analyzer software which can show you the audio frequency
of the signal from the rig's audio, this will help a lot. Set the rig to receive USB at 9.999,000 MHz. This will cause
a 1 kHz beat note when a 10.000,000 MHz signal is received. The PSK waterfall can be used to show you when
you have adjusted the DDS frequency to produce the exact 1 kHz beat note. A short pick up wire attached to a
piece of coax going to the rigs antenna jack and placed near the TP1 test point should pick up plenty of signal. If
you have no means of accurately measuring 10 MHz, skip through this procedure by clicking the MENU switch
after step 6 and go directly to the LO cal procedure."

I am guessing it has nothing to do with WWV. I was going to connect my TS-480 with its high stability txco to a dummy load and set it for 5 Watts at first. I will then connect the headphone jack of the ATS3b to the sound card input. I have already calibrated the sound card in MixW. Then I will wrap some wire around the coax going to the dummy load and put the other end of the wire near TP1. Then transmit into the dummy load with the TS-480 set to 9999.0 USB, and look at the results on my sound card.

Does this sound logical?
Steve, W2MY

2884. Re: [AT_Sprint] Reference Oscillator Frequency Calibration Procedure ATS3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-05 02:28:27 UTC
From: Michael Harnage
Topic: 2883 Message: 2884

Read this to get another idea...

< http://w1mt.qrpradio.com/ats3calibration.html >

Of course, the 3b does not have an IF inductor so skip
that part. :)

-mike/w1mt

--- Steven Pituch <list2@...> wrote:

> Hi All,
> I am not sure about how to do this procedure, using
> my transceiver.
>

_____
You rock. That's why Blockbuster's offering you one month of Blockbuster Total Access, No Cost.
http://tc.deals.yahoo.com/tc/blockbuster/text5.com

2885. Re: An extra D1?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-05 02:37:34 UTC
From: radio_kx0r
Topic: 2882 Message: 2885

--- In AT_Sprint@yahoogroups.com, Dale Putnam <daleputnam@...> wrote:

Dale,

D1 is a schottky diode rated at 1A. The ATS-3A used the SS12, which is a 20V 1A diode. The ATS-3B uses either the SS12 or the SS13, which is rated at 30V 1A. The schematic says SS13, and the parts list says SS12. Either one will work fine unless you exceed 20V reversed - if you think you need 30V of reverse protection, use the SS13.

Mouser has them both:

SS12 Mouser 821-SS12 $.20 ea Taiwan Semiconductor
SS12 Mouser 512-SS12 $.27 ea Fairchild

SS13 Mouser 821-SS13 $.20 ea Taiwan Semiconductor
SS13 Mouser 512-SS13 $.27 ea Fairchild

Pick one - they have lots of other choices as well.

I don't think Mouser has a minimum order, but you might want to order some other goodies while you're there. I just ordered a lifetime supply of banana plugs and jacks from them, and my online order was perfect and delivered in 3 days by UPS ground. I put bananas on all my balanced lines, tuners, and antennas so everything can plug together easily.

Sorry I don't have any stock on this one - a 1N5819 with axial leads would work electrically, but I'm not sure it will fit under there.

72/73

Carey
KX0R

>
> I'm looking for an extra D1 that is used in the AT series radios. Does anyone have an extra or could make a recommend as to who might have them? It is the polarity protection diode.
> Thanks,
> --... ...--Dale - WC7S in Wy
> _____
> Going green? See the top 12 foods to eat organic.
> http://green.msn.com/galleries/photos/photos.aspx?gid=164&ocid=T003MSN51N1653A
>

2886. RE: [AT_Sprint] Re: An extra D1?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-05 03:00:09 UTC
From: Dale Putnam
Topic: 2882 Message: 2886

Thanks Carey,
I thought that was going to be what I needed. I am trying to prove a thought that the AT series can be powered by two different sources, seperated by switch and protected by diode. But I need a low loss diode and know that Steve prefers a good one as D1. So.. thank you for the pointer.
I'm building an AT3 up for a blind ham, and adding a few extras so he won't get into trouble.
I'm also building one for me, and mounting it, battery and atu in a Spiderman box... maybe I'll post a photo of both of em when I finish.
Thanks for the help,--... ...--Dale - WC7S in Wy

To: AT_Sprint@yahoogroups.comFrom: careyfuller@...: Sat, 5 Apr 2008 02:37:34 +0000Subject: [AT_Sprint] Re: An extra D1?

--- In AT_Sprint@yahoogroups.com, Dale Putnam <daleputnam@...> wrote:Dale,D1 is a schottky diode rated at 1A. The ATS-3A used the SS12, which is a 20V 1A diode. The ATS-3B uses either the SS12 or the SS13, which is rated at 30V 1A. The schematic says SS13, and the parts list says SS12. Either one will work fine unless you exceed 20V reversed - if you think you need 30V of reverse protection, use the SS13.Mouser has them both:SS12 Mouser 821-SS12 $.20 ea Taiwan Semiconductor SS12 Mouser 512-SS12 $.27 ea FairchildSS13 Mouser 821-SS13 $.20 ea Taiwan Semiconductor SS13 Mouser 512-SS13 $.27 ea FairchildPick one - they have lots of other choices as well.I don't think Mouser has a minimum order, but you might want to order some other goodies while you're there. I just ordered a lifetime supply of banana plugs and jacks from them, and my online order was perfect and delivered in 3 days by UPS ground. I put bananas on all my balanced lines, tuners, and antennas so everything can plug together easily.Sorry I don't have any stock on this one - a 1N5819 with axial leads would work electrically, but I'm not sure it will fit under there.72/73CareyKX0R > > I'm looking for an extra D1 that is used in the AT series radios. Does anyone have an extra or could make a recommend as to who might have them? It is the polarity protection diode. > Thanks,> --... ...--Dale - WC7S in Wy>
_____> Going green? See the top 12 foods to eat organic.>
http://green.msn.com/galleries/photos/photos.aspx?gid=164&ocid=T003MSN51N1653A>

Going green? See the top 12 foods to eat organic.
http://green.msn.com/galleries/photos/photos.aspx?gid=164&ocid=T003MSN51N1653A

2887. Re: Reference Oscillator Frequency Calibration Procedure ATS3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-05 03:56:18 UTC
From: Dave
Topic: 2883 Message: 2887

Steve's intent with that procedure was for you to listen with your TS-480 tuned to 9.999000 MHz USB for the 10 MHz calibration signal coming from TP1 of the ATS-3B and adjust The ATS-3B until you see that the audio tone from the TS-480 is 1000 Hz.

Dave, WA3OFF

2888. CW Speed Stuck Slow.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-05 16:57:10 UTC
From: Steven Pituch
Topic: 2883 Message: 2888

Hi all,

Thanks all for the info on the ref osc calibration. It seems I had it 180 degrees wrong.

My next dilema is that my bee know seems to be stuck at about .1 WPM. It takes forever to announce the frequency. I had been able to change the cw speed and the annunciation speed before, but don't know what happened to put it in this state. When I go to change the cw speed it appears to take the commands but the speed never gets faster.

Any suggestions? I am going to do the calibration but at this point it will probably take a long time.

Thanks,
Steve, W2MY

2889. Missing parts - ATS3-B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-05 21:15:15 UTC
From: Stephen Wandling
Topic: 2889 Message: 2889

I've looked at the file section and searched through the messages and I don't find mention of anyone reporting missing parts. I guess I'm the lucky one. I am missing the six 0805 22k resistors (marked 223). I haven't inventoried everything, but I do have the rest of the SMT parts.

Am I correct in assuming that with Steve on the trail, there is no one manning the shop to supply missing parts? If so, that kind of blows my summer.

Maybe one of you won't be starting their kit for awhile and could 'loan' me those resistors?

I haven't, and probably won't, do a formal proofread of the manual, but I have noted errors. This surprises me as this is the third batch of these rigs. It would appear that previous builders knew that a 3.3 k resistor is not marked 392, but 332. But, for some, this could cause hours of confusion. As a project manager myself, I assure you that I would want to see feedback on issues like this. I don't see this as nitpicking, but providing a real service for the designer/kit supplier and a service to fellow hams.

72,
Stephen
VE7NSD

2890. Re: [AT_Sprint] Missing parts - ATS3-B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-05 22:15:53 UTC
From: Kurt Savegnago
Topic: 2889 Message: 2890

--- Stephen Wandling <swandling@...> wrote:

> I've looked at the file section and searched through
> the messages and I
> don't find mention of anyone reporting missing
> parts. I guess I'm the
> lucky one. I am missing the six 0805 22k resistors
> (marked 223). I
> haven't inventoried everything, but I do have the
> rest of the SMT parts.
mt

Why don't you just look up the parts and order some
from some other concern? SMT resistors are pretty
cheap. Why impose on someone to mail you the parts
when it doesn't take much to get them yourself?

Kurt

2891. Re: [AT_Sprint] Missing parts - ATS3-B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-05 22:33:47 UTC
From: Stephen Wandling
Topic: 2889 Message: 2891

Kurt,

I am pleased to report that another ham has offered to send me the six resistors that I need. This is how amateur radio has worked long time and I hope it continues to do so.

Stephen
VE7NSD

Kurt Savegnago wrote:
>
>
> --- Stephen Wandling <swandling@...
> <mailto:swandling%40gmail.com>> wrote:
>
> > I've looked at the file section and searched through
> > the messages and I
> > don't find mention of anyone reporting missing
> > parts. I guess I'm the
> > lucky one. I am missing the six 0805 22k resistors
> > (marked 223). I
> > haven't inventoried everything, but I do have the
> > rest of the SMT parts.
> mt
>
> Why don't you just look up the parts and order some
> from some other concern? SMT resistors are pretty
> cheap. Why impose on someone to mail you the parts
> when it doesn't take much to get them yourself?
>
> Kurt
>
>

2892. RE: [AT_Sprint] Missing parts - ATS3-B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-05 22:44:44 UTC
From: Dale Putnam
Topic: 2889 Message: 2892

If it turns out your still short, let me know k?
--... ...--Dale - WC7S in Wy

To: AT_Sprint@yahoogroups.comFrom: swandling@...: Sat, 5 Apr 2008 15:33:47 -0700Subject: Re: [AT_Sprint] Missing parts - ATS3-B

Kurt,I am pleased to report that another ham has offered to send me the six resistors that I need. This is how amateur radio has worked long time and I hope it continues to do so. StephenVE7NSDKurt Savegnago wrote:>>> --- Stephen Wandling <swandling@... > <mailto:swandling%40gmail.com>> wrote:>> > I've looked at the file section and searched through> > the messages and I> > don't find mention of anyone reporting missing> > parts. I guess I'm the> > lucky one. I am missing the six 0805 22k resistors> > (marked 223). I> > haven't inventoried everything, but I do have the> > rest of the SMT parts.> mt>> Why don't you just look up the parts and order some> from some other concern? SMT resistors are pretty> cheap. Why impose on someone to mail you the parts> when it doesn't take much to get them yourself?>> Kurt>>

_____
Pack up or back up–use SkyDrive to transfer files or keep extra copies. Learn how.
hthttp://www.windowslive.com/skydrive/overview.html?ocid=TXT_TAGLM_WL_Refresh_skydrive_backup_042008

2893. RE: [AT_Sprint] Missing parts - ATS3-B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-05 22:49:51 UTC
From: Dale Putnam
Topic: 2889 Message: 2893

Well like I said to the wrong address...we'll see what that turns up...
But if you do come up short on anything else, let me know...k?--... ...--Dale - WC7S in Wy

To: AT_Sprint@yahoogroups.comFrom: swandling@...: Sat, 5 Apr 2008 14:15:15 -0700Subject: [AT_Sprint] Missing parts - ATS3-B

I've looked at the file section and searched through the messages and I don't find mention of anyone reporting missing parts. I guess I'm the lucky one. I am missing the six 0805 22k resistors (marked 223). I haven't inventoried everything, but I do have the rest of the SMT parts.Am I correct in assuming that with Steve on the trail, there is no one manning the shop to supply missing parts? If so, that kind of blows my summer.Maybe one of you won't be starting their kit for awhile and could 'loan' me those resistors?I haven't, and probably won't, do a formal proofread of the manual, but I have noted errors. This surprises me as this is the third batch of these rigs. It would appear that previous builders knew that a 3.3 k resistor is not marked 392, but 332. But, for some, this could cause hours of confusion. As a project manager myself, I assure you that I would want to see feedback on issues like this. I don't see this as nitpicking, but providing a real service for the designer/kit supplier and a service to fellow hams.72,StephenVE7NSD

Get in touch in an instant. Get Windows Live Messenger now.
http://www.windowslive.com/messenger/overview.html?ocid=TXT_TAGLM_WL_Refresh_getintouch_04 2008

2894. RE: [AT_Sprint] Missing parts - ATS3-B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-05 22:52:16 UTC
From: Dale Putnam
Topic: 2889 Message: 2894

Ya know, a wise fellow, under a worn, and curled hat, once said..."when ya find yar diggin a hole... turn loose a the shovel."--... ...--Dale - WC7S in Wy

_____
More immediate than e-mail? Get instant access with Windows Live Messenger.
http://www.windowslive.com/messenger/overview.html?ocid=TXT_TAGLM_WL_Refresh_instantaccess_042008

2895. Re: [AT_Sprint] Missing parts - ATS3-B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-06 12:20:43 UTC
From: n0tu/Steve
Topic: 2889 Message: 2895

Unless the hole fills with water ...then the shovel becomes an oar!
Steve/n0tu

On Sat, Apr 5, 2008 at 11:52 PM, Dale Putnam <daleputnam@...> wrote:
>
> Ya know, a wise fellow, under a worn, and curled hat, once said...
> "when ya find yar diggin a hole... turn loose a the shovel."
>
> --... ...--
> Dale - WC7S in Wy
>
>
>
> _____
> More immediate than e-mail? Get instant access with Windows Live Messenger.
>

2896. RE: [AT_Sprint] Missing parts - ATS3-B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-06 13:00:24 UTC
From: Dale Putnam
Topic: 2889 Message: 2896

Very true... or if it is in a mountain, then it might fill with snow.
How you doing? Keep reading about you, Rooster and Peanut,
grand fun.
I think spring may be getting here... the tanks were only covered a little ice this morning... and there is a persistnat tulip that poked up yesterday... maybe we will find global warming yet.
Have a great weekend...--... ...--Dale - WC7S in Wy

To: AT_Sprint@yahoogroups.comFrom: n0tu.qrp@...Date: Sun, 6 Apr 2008 13:20:43 +0100Subject: Re: [AT_Sprint] Missing parts - ATS3-B

Unless the hole fills with water ...then the shovel becomes an oar!Steve/n0tuOn Sat, Apr 5, 2008 at 11:52 PM, Dale Putnam <daleputnam@hotmail.com> wrote:>> Ya know, a wise fellow, under a worn, and curled hat, once said...> "when ya find yar diggin a hole... turn loose a the shovel.">> --... ...--> Dale - WC7S in Wy>>>> _____> More immediate than e-mail? Get instant access with Windows Live Messenger.>

_____
Going green? See the top 12 foods to eat organic.
http://green.msn.com/galleries/photos/photos.aspx?gid=164&ocid=T003MSN51N1653A

2897. Re: [AT_Sprint] Missing parts - ATS3-B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-06 15:32:30 UTC
From: Kurt Savegnago
Topic: 2889 Message: 2897

That's nice but I expect he had some of the resistors
around in a collection. I think to ask someone to
break apart a kit is rather forward. The SMT parts are
really dirt cheap for the resistors especially.

Kurt KC9LDH
--- Stephen andling <swandling@...> wrote:

> Kurt,
>
> I am pleased to report that another ham has offered
> to send me the six
> resistors that I need. This is how amateur radio
> has worked long time
> and I hope it continues to do so.
>
> Stephen
> VE7NSD
>
> Kurt Savegnago wrote:
> >
> >
> > --- Stephen Wandling <swandling@...
> > <mailto:swandling%40gmail.com>> wrote:
> >
> > > I've looked at the file section and searched
> through
> > > the messages and I
> > > don't find mention of anyone reporting missing
> > > parts. I guess I'm the
> > > lucky one. I am missing the six 0805 22k
> resistors
> > > (marked 223). I
> > > haven't inventoried everything, but I do have
> the
> > > rest of the SMT parts.
> > mt
> >
> > Why don't you just look up the parts and order
> some
> > from some other concern? SMT resistors are pretty
> > cheap. Why impose on someone to mail you the parts
> > when it doesn't take much to get them yourself?
> >
> > Kurt

> >
> >
>
> ---
>
> Yahoo! Groups Links
>
>
>
>
>

2898. Re: Missing parts - ATS3-B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-06 16:35:52 UTC
From: radio_kx0r
Topic: 2889 Message: 2898

--- In AT_Sprint@yahoogroups.com, Stephen Wandling <swandling@...>
wrote:

Stephen,

Sorry you were the unlucky one who had parts missing. This hasn't happened to many of us - the three kits Steve has sent me have been complete. Steve has been helpful and generous about correcting little things, including providing updated firmware for bug fixes, etc.

How Steve runs his business is his business, but we know Steve isn't Elecraft. He has provided several amazing kits to perhaps several hundred loyal followers. This group here is like a club - we have common interests and share information.

When we find a problem or have a question, we post it here. Usually someone helpful answers. Steve participates actively when he's not out on the trail.

I'd suggest looking at Mouser or Digikey for common components like the resistors you needed - if you need help choosing the right part, several of us here can probably assist. Yes, the markings on some of these parts can be challenging. This is one of the aspects of the elecronics industry that has not really changed. I still have boxes of old molded mica caps that have various patterns of colored dots on them - there were several codes used, and it's easier to measure them than to decode them!

Of course, the unmarked chip caps in our kits are even worse. If you mix these up, you'll need a capacitance meter to read them. I think it's amazing that the industry works this way, but since most high-volume assembly is automated, markings aren't needed.

Yes, there are a few errors in the "final" manual I have. An important updated ATS-3B schematic is posted in the "FILES" section here - Steve corrected various component designators, and you should copy and reference this drawing to avoid serious confusion. Perhaps your manual has been updated - but please check to see. There are still a few errors on this drawing - including that the driver IC is shown as 74HC02, even though it was upgraded to a 74AC02 in all the "B" rigs.

Building an ATS rig is a series of challenges. It isn't a beginner's kit, and some of us have had to do a bit more than just follow directions. I thought figuring out how to orient the various IC's was tricky, although I got them all OK. Steve's directions are

right. The alignment is subtle enough that you probably will do it at least twice, if you want your rig to perform as designed. If you want maximum RF performance on all bands, look at my notes on the filter modules. I spent more time on those than on building the rig.

The bottom line is that the ATS rigs were designed for field and trail use, and they're incredible performers. You can actually use these rigs out in the woods or at a campsite and make good QSO's, without carrying much weight. There are a few errors in the documentation, but the rigs are amazing. We're fortunate that Steve made this kind of technology available to us.

I just read your bio on QRZ - very interesting, and you're in a great place for serious QRP operating! Don't hesitate to post questions and share your experience. This is a positive group, with a range of experience and specialized knowledge about the ATS rigs.

72/73

Carey
KX0R

> I've looked at the file section and searched through the messages and I
> don't find mention of anyone reporting missing parts. I guess I'm the
> lucky one. I am missing the six 0805 22k resistors (marked 223). I
> haven't inventoried everything, but I do have the rest of the SMT parts.
>
> Am I correct in assuming that with Steve on the trail, there is no one
> manning the shop to supply missing parts? If so, that kind of blows my
> summer.
>
> Maybe one of you won't be starting their kit for awhile and could 'loan'
> me those resistors?
>
> I haven't, and probably won't, do a formal proofread of the manual, but
> I have noted errors. This surprises me as this is the third batch of
> these rigs. It would appear that previous builders knew that a 3.3 k
> resistor is not marked 392, but 332. But, for some, this could cause
> hours of confusion. As a project manager myself, I assure you that

I
> would want to see feedback on issues like this. I don't see this
as
> nitpicking, but providing a real service for the designer/kit
supplier
> and a service to fellow hams.
>
> 72,
> Stephen
> VE7NSD
>

2899. Re: [AT_Sprint] Re: Missing parts - ATS3-B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-06 18:06:31 UTC
From: Stephen Wandling
Topic: 2889 Message: 2899

Carey,

I have a bit of a quick trigger finger, and once again it has resulted in me implying more than I intended. Thank you for bringing some balance to the issue. (Speaking of balance, I note that each character in your call is a CW palindrome)

I meant no criticism of Steve, the rig or the kit. And in truth, I thrive on challenges. In hindsight, I think I wanted to challenge this group to give Steve all of the support they can, and that doesn't only mean just making positive comments on what they like about the rig/kit. I suspect that Elecraft didn't become who they are without quality control feedback, and that always includes what's wrong or could be better. Not that Steve wants to become an Elecraft.

Regarding the documentation, I discern between typo/spelling issues and errors. Chinese editors are said to leave a few typos in their publications because they know how superior it makes the reader feel when they find them. :-) But, an error could put a less experienced builder into a tailspin. Of course, that's what this group is all about; helping builders through the rough spots.

I'm here because the Old Goat, N0TU, and I almost had a QSO when he was on one of his treks on Mt. Herman (QSB ate us both). I figured if he could hear my 2.5 watts from Vancouver, BC, and I could hear him, with his 4 watts and EFHW hanging in a tree, then this had to be a pretty special rig. I can't wait until I can finish that QSO with him while I'm sitting on one of our local mountains with my Bee and one of Dennis Foster's "Micro" paddles.

72,
Stephen
VE7NSD

radio_kx0r wrote:
>
> --- In AT_Sprint@yahoogroups.com <mailto:AT_Sprint%40yahoogroups.com>,
> Stephen Wandling <swandling@...>
> wrote:
>
> Stephen,
>
> Sorry you were the unlucky one who had parts missing. This hasn't
> happened to many of us - the three kits Steve has sent me have been
> complete. Steve has been helpful and generous about correcting
> little things, including providing updated firmware for bug fixes,

> etc.
>
> How Steve runs his business is his business, but we know Steve isn't
> Elecraft. He has provided several amazing kits to perhaps several
> hundred loyal followers. This group here is like a club - we have
> common interests and share information.
>
> When we find a problem or have a question, we post it here. Usually
> someone helpful answers. Steve participates actively when he's not
> out on the trail.
>
> I'd suggest looking at Mouser or Digikey for common components like
> the resistors you needed - if you need help choosing the right part,
> several of us here can probably assist. Yes, the markings on some of
> these parts can be challenging. This is one of the aspects of the
> elecronics industry that has not really changed. I still have boxes
> of old molded mica caps that have various patterns of colored dots on
> them - there were several codes used, and it's easier to measure them
> than to decode them!
>
> Of course, the unmarked chip caps in our kits are even worse. If you
> mix these up, you'll need a capacitance meter to read them. I think
> it's amazing that the industry works this way, but since most high-
> volume assembly is automated, markings aren't needed.
>
> Yes, there are a few errors in the "final" manual I have. An
> important updated ATS-3B schematic is posted in the "FILES" section
> here - Steve corrected various component designators, and you should
> copy and reference this drawing to avoid serious confusion. Perhaps
> your manual has been updated - but please check to see. There are
> still a few errors on this drawing - including that the driver IC is
> shown as 74HC02, even though it was upgraded to a 74AC02 in all
> the "B" rigs.
>
> Building an ATS rig is a series of challenges. It isn't a beginner's
> kit, and some of us have had to do a bit more than just follow
> directions. I thought figuring out how to orient the various IC's
> was tricky, although I got them all OK. Steve's directions are
> right. The alignment is subtle enough that you probably will do it
> at least twice, if you want your rig to perform as designed. If you
> want maximum RF performance on all bands, look at my notes on the
> filter modules. I spent more time on those than on building the rig.
>
> The bottom line is that the ATS rigs were designed for field and
> trail use, and they're incredible performers. You can actually use
> these rigs out in the woods or at a campsite and make good QSO's,
> without carrying much weight. There are a few errors in the
> documentation, but the rigs are amazing. We're fortunate that Steve
> made this kind of technology available to us.
>

> I just read your bio on QRZ - very interesting, and you're in a great
> place for serious QRP operating! Don't hesitate to post questions
> and share your experience. This is a positive group, with a range of
> experience and specialized knowledge about the ATS rigs.
>
> 72/73
>
> Carey
> KX0R
>
> >
> > I've looked at the file section and searched through the messages
> and I
> > don't find mention of anyone reporting missing parts. I guess I'm
> the
> > lucky one. I am missing the six 0805 22k resistors (marked 223).
> I
> > haven't inventoried everything, but I do have the rest of the SMT
> parts.
> >
> > Am I correct in assuming that with Steve on the trail, there is no
> one
> > manning the shop to supply missing parts? If so, that kind of
> blows my
> > summer.
> >
> > Maybe one of you won't be starting their kit for awhile and
> could 'loan'
> > me those resistors?
> >
> > I haven't, and probably won't, do a formal proofread of the manual,
> but
> > I have noted errors. This surprises me as this is the third batch
> of
> > these rigs. It would appear that previous builders knew that a 3.3
> k
> > resistor is not marked 392, but 332. But, for some, this could
> cause
> > hours of confusion. As a project manager myself, I assure you that
> I
> > would want to see feedback on issues like this. I don't see this
> as
> > nitpicking, but providing a real service for the designer/kit
> supplier
> > and a service to fellow hams.
> >
> > 72,
> > Stephen
> > VE7NSD
> >

>
>

2900. Re: [AT_Sprint] Re: Missing parts - ATS3-B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-06 19:11:20 UTC
From: n0tu/Steve
Topic: 2889 Message: 2900

Stephen, I'm looking forward to same!
The Old Goat ~ n0tu/p

> I can't wait until I can finish that QSO with him while
> I'm sitting on one of our local mountains with my Bee and one of Dennis
> Foster's "Micro" paddles.

2901. Attn: northeastern Ohio ATS/portable rig owners

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-06 19:31:14 UTC
From: Tim Davisson
Topic: 2901 Message: 2901

Am trying to find another ham in the
greater Akron-Canton-Cleveland, Ohio
area as an "elmer"/ham friend who can
offer advice in portable operation,
as I know nothing about these cool
little battery-powered rigs,antennas,
and what's involved otherwise.

Was inactive for 20 years...just got
back into the hobby a couple years
ago and the hams I now know are into
SSB or fixed operation.

Need some advice for portable QRP/CW.
(Any time I can do my ham hobby
away from home makes the XYL happy.
LOL, hi, hi).

Please reply to my e-mail address:
kd8gz@....

Thanks, guys.

72's,

Tim, KD8GZ
Norton, Ohio (near Akron)

2902. Re: Missing parts - ATS3-B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-07 00:40:04 UTC
From: radio_kx0r
Topic: 2889 Message: 2902

--- In AT_Sprint@yahoogroups.com, Stephen Wandling <swandling@...>
wrote:

Stephen,

Thanks for such an interesting answer! I think you're sure to enjoy
the ATS-3B and the experiences it leads to. I like to use the
word "magical".

I knew about my call, but I had to look up "palindrome".

N0TU sure has a unique station and companions...nice location down
there.

If you find yourself in a dilemma as you build your rig, just post
something here, and someone will reply with his version of the
situation. The most common problem seems to be parts that fly away!

72/73

KX0R
>
> Carey,
>
> I have a bit of a quick trigger finger, and once again it has
resulted
> in me implying more than I intended. Thank you for bringing some
> balance to the issue. (Speaking of balance, I note that each
character
> in your call is a CW palindrome)
>
> I meant no criticism of Steve, the rig or the kit. And in truth, I
> thrive on challenges. In hindsight, I think I wanted to challenge
this
> group to give Steve all of the support they can, and that doesn't
only
> mean just making positive comments on what they like about the
rig/kit.
> I suspect that Elecraft didn't become who they are without quality
> control feedback, and that always includes what's wrong or could be
> better. Not that Steve wants to become an Elecraft.
>
> Regarding the documentation, I discern between typo/spelling issues
and
> errors. Chinese editors are said to leave a few typos in their
> publications because they know how superior it makes the reader
feel

> when they find them. :-) But, an error could put a less
experienced
> builder into a tailspin. Of course, that's what this group is all
> about; helping builders through the rough spots.
>
> I'm here because the Old Goat, N0TU, and I almost had a QSO when he
was
> on one of his treks on Mt. Herman (QSB ate us both). I figured if
he
> could hear my 2.5 watts from Vancouver, BC, and I could hear him,
with
> his 4 watts and EFHW hanging in a tree, then this had to be a
pretty
> special rig. I can't wait until I can finish that QSO with him
while
> I'm sitting on one of our local mountains with my Bee and one of
Dennis
> Foster's "Micro" paddles.
>
> 72,
> Stephen
> VE7NSD

2903. New file uploaded to AT_Sprint

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-07 07:32:34 UTC
From: AT_Sprint@yahoogroups.com
Topic: 154 Message: 2903

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the AT_Sprint
group.

File : /Improvement of ATS.doc
Uploaded by : milanstejskal <milan.stejskal@...>
Description : ATT inside in ATS-3B

You can access this file at the URL:
http://groups.yahoo.com/group/AT_Sprint/files/Improvement%20of%20ATS.doc

To learn more about file sharing for your group, please visit:
http://help.yahoo.com/l/us/yahoo/groups/original/members/web/index.htmlfiles

Regards,

milanstejskal <milan.stejskal@...>

2904. Nice case, OM. (7N4WBD's 3B in a Takachi MX2-8-13GS case)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-07 22:13:47 UTC
From: kc7fys
Topic: 2904 Message: 2904

Without much fanfare 7N4WBD posted very nice photos of his bee in a
Takachi case. It appears to have required a little reworking of the
band modules, but allows space (apparently from the photos) for a
speaker and etc.
Very nice 3B, OM.
Jonathan 7J1AWL/KC7FYS
PHOTOS (also here in the YahooGroup Photos section)
<http://www.flickr.com/groups/ats_qrp/pool/>

2905. NAQCC Sprint Tuesday night!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-07 23:30:33 UTC
From: Larry Makoski W2LJ
Topic: 2905 Message: 2905

This coming Tuesday evening will be the monthly NAQCC Sprint for April, 2008.

I will refer you to the proper URL:

http://www.arm-tek.net/~yoel//sprint200804.html

There you will find all the details as to time, frequencies, this month's Special Award, which will be awarded to the highest place scorer to make at least 5 or more contacts on EACH band (80, 40, 20 Meters).

This is a monthly event that caters to the CW veteran, the CW newcomer, straight key and bug fans. All are welcome to participate; but you must use QRP power levels to compete for awards.

Come join us and have a real good time!

73 de Larry W2LJ
NAQCC #035

2906. CT 2 & 3 Help please

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-08 06:58:22 UTC
From: pswarman
Topic: 2906 Message: 2906

I have built the main board and so far only had one 'flying' component, I am now starting on the filter modules. For the 6 modules I have 8 green trimmers for CT2 & 3 and 4 brown trimmers. The manual mentions that all trimmers are brown with a colour coding on the side. The brown trimmers are higher value ones and I am assuming they are for 80 and 40 mtrs. I guess the rest will be suitable for any of the higher bands. This is a recently purchased model, has anyone else had the same issue and overcome it? I had planned on following the KX0R filter module tweaks.
Thanks for your time.
Paul, G0odp

2907. Re: CT 2 & 3 Help please

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-08 12:24:00 UTC
From: Bill
Topic: 2906 Message: 2907

You are correct Paul, the brown trimmers CT2 and CT3 are for 80 and 40 meters. Maybe you don't have the rev 3 manual? I use the PDF that came on the CD page 22. Said ATS3Bmanual V3.pdf

73, Bill NT9K..

--- In AT_Sprint@yahoogroups.com, "pswarman" <pswarman@...> wrote:
>
> I have built the main board and so far only had one 'flying' component,
> I am now starting on the filter modules. For the 6 modules I have 8
> green trimmers for CT2 & 3 and 4 brown trimmers. The manual mentions
> that all trimmers are brown with a colour coding on the side. The brown
> trimmers are higher value ones and I am assuming they are for 80 and 40
> mtrs. I guess the rest will be suitable for any of the higher bands.
> This is a recently purchased model, has anyone else had the same issue
> and overcome it? I had planned on following the KX0R filter module
> tweaks.
> Thanks for your time.
> Paul, G0odp
>

2908. Re: CT 2 & 3 Help please

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-08 13:49:12 UTC
From: pswarman
Topic: 2906 Message: 2908

Boy am I embarrassed!!!!! Thanks Bill, I think I must have printed the manual from some other source as there are a few subtle differences to the CD copy. I'll shut up now and get on with the job.
Many thanks Bill
Paul, G0odp

--- In AT_Sprint@yahoogroups.com, "Bill" <Bill@...> wrote:
>
> You are correct Paul, the brown trimmers CT2 and CT3 are for 80 and 40
> meters. Maybe you don't have the rev 3 manual? I use the PDF that came
> on the CD page 22. Said ATS3Bmanual V3.pdf
>
> 73, Bill NT9K..
>
> --- In AT_Sprint@yahoogroups.com, "pswarman" <pswarman@> wrote:
> >
> > I have built the main board and so far only had one 'flying' component,
> > I am now starting on the filter modules. For the 6 modules I have 8
> > green trimmers for CT2 & 3 and 4 brown trimmers. The manual mentions
> > that all trimmers are brown with a colour coding on the side. The brown
> > trimmers are higher value ones and I am assuming they are for 80 and 40
> > mtrs. I guess the rest will be suitable for any of the higher bands.
> > This is a recently purchased model, has anyone else had the same issue
> > and overcome it? I had planned on following the KX0R filter module
> > tweaks.
> > Thanks for your time.
> > Paul, G0odp
> >
>

2909. Missing parts help

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-08 16:46:57 UTC
From: Matt
Topic: 2909 Message: 2909

I'm missing both the 2.2pF and 4.7pF caps for the filter boards, can someone tell me what type/voltage these caps are supposed to be so i can find suitable replacements in my junk box?

Matt
KD8DAO

P.S. I'm excited to get this thing on the air now that I'm near the end of building it.

2910. Re: [AT_Sprint] Missing parts help

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-08 18:07:22 UTC
From: Steven Pituch
Topic: 2909 Message: 2910

Hi Matt,

I am also missing those parts as well as the two15 pf caps for the modules.

I just ordered a 190 part package from Diz, of Kits and Parts. This is a great deal and I will use the other components for mods later on. see: http://kitsandparts.com/
Steve, W2MY

----- Original Message -----
From: "Matt" <kd8dao@...>
To: <AT_Sprint@yahoogroups.com>
Sent: Tuesday, April 08, 2008 11:46 AM
Subject: [AT_Sprint] Missing parts help

> I'm missing both the 2.2pF and 4.7pF caps for the filter boards, can
> someone tell me what type/voltage these caps are supposed to be so i
> can find suitable replacements in my junk box?
>
>
> Matt
> KD8DAO
>
> P.S. I'm excited to get this thing on the air now that I'm near the
> end of building it.
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>
>
>
> --
> No virus found in this incoming message.
> Checked by AVG.
> Version: 7.5.519 / Virus Database: 269.22.9/1365 - Release Date: 4/8/2008
> 7:30 AM
>
>

2911. Re: [AT_Sprint] Missing parts help

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-08 19:06:14 UTC
From: Stephen Wandling
Topic: 2909 Message: 2911

Matt,

I am pretty sure that they are NPO caps. If you don't find them in your junk box, I have a quantity of them in mine, and would be pleased to send you a couple of each.

72,
Stephen
VE7NSD

Matt wrote:
>
> I'm missing both the 2.2pF and 4.7pF caps for the filter boards, can
> someone tell me what type/voltage these caps are supposed to be so i
> can find suitable replacements in my junk box?
>
> Matt
> KD8DAO
>
> P.S. I'm excited to get this thing on the air now that I'm near the
> end of building it.
>
>

2912. Help/suggestions needed

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-08 23:45:41 UTC
From: w6zuluhotel
Topic: 2912 Message: 2912

Hello All: I am in the process of building one of the last batch of ATS3B's and have successfully reached the Check out and Calibration stage and the Reference Oscillator freq calibration, but that's where I "run aground"- namely the LO freq trim. I do not hear a "low tone" when switching to the CO step. I've checked the trouble shooting suggestions, no solder bridges that I can see, all voltages measure as they should be. I cannot hear the U2 4.9152 crystal oscillator.

What now? Suggestions?

TIA

Pete, W6ZH

2913. Re: [AT_Sprint] Help/suggestions needed

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-09 00:22:03 UTC
From: Michael Harnage
Topic: 2912 Message: 2913

Since you don't hear the LO I would suggest double
check all parts in that area. Especially the power
supply and the SA612 mixer (orientation, as well as
joints). Could be the audio chain especially since you
don't hear the tone, but I am assuming that you hear
the morse code feedback, right?, so that may not be
it.

One thing that can work is to use a toothpick (non
conductive) and press on the legs of the various IC's
involved while listening. This can sometimes pinpoint
a problem joint.

Do you have a scope? or RF probe?

-mike/w1mt

--- w6zuluhotel <w6zh@...> wrote:

> Hello All: I am in the process of building one of
> the last batch of
> ATS3B's and have successfully reached the Check out
> and Calibration
> stage and the Reference Oscillator freq calibration,
> but that's where
> I "run aground"- namely the LO freq trim. I do not
> hear a "low tone"
> when switching to the CO step. I've checked the
> trouble shooting
> suggestions, no solder bridges that I can see, all
> voltages measure as
> they should be. I cannot hear the U2 4.9152 crystal
> oscillator.
>
> What now? Suggestions?
>
> TIA
>
> Pete, W6ZH
>
>

You rock. That's why Blockbuster's offering you one month of Blockbuster Total Access, No
Cost.
http://tc.deals.yahoo.com/tc/blockbuster/text5.com

2914. Re: [AT_Sprint] Help/suggestions needed

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-09 00:43:42 UTC
From: Steven Pituch
Topic: 2912 Message: 2914

Hi Pete,
I also have one of the last run ATS3bs. Check the variable capacitor on the main board CT1. I think its the bfo adjustment. Tweak it a bit and you might get the tone within audio range if its currently zero beat. Its actually the next alignment step on the next page. (Or maybe I'm way off here)
Steve, W2MY

----- Original Message -----
From: "w6zuluhotel" <w6zh@...>
To: <AT_Sprint@yahoogroups.com>
Sent: Tuesday, April 08, 2008 6:45 PM
Subject: [AT_Sprint] Help/suggestions needed

> Hello All: I am in the process of building one of the last batch of
> ATS3B's and have successfully reached the Check out and Calibration
> stage and the Reference Oscillator freq calibration, but that's where
> I "run aground"- namely the LO freq trim. I do not hear a "low tone"
> when switching to the CO step. I've checked the trouble shooting
> suggestions, no solder bridges that I can see, all voltages measure as
> they should be. I cannot hear the U2 4.9152 crystal oscillator.
>
> What now? Suggestions?
>
> TIA
>
> Pete, W6ZH
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>
>
>
> --
> No virus found in this incoming message.
> Checked by AVG.
> Version: 7.5.519 / Virus Database: 269.22.9/1365 - Release Date: 4/8/2008
> 7:30 AM
>
>

2915. Re: Missing parts help

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-09 01:00:19 UTC
From: radio_kx0r
Topic: 2909 Message: 2915

--- In AT_Sprint@yahoogroups.com, "Matt" <kd8dao@...> wrote:

Matt,

These 2.2pf and 4.7pf caps are used for C6F on the various filter boards. The schematic in my "B" manual shows this cap as C9F, but that's one of those little errors some of us have noted. The PCB and the chart in the manual say C6F. This cap is used as the coupling cap in the double-tuned circuit for the receiver's front end. The caps in my kit are disc ceramic.

The caps are probably NPO (COG), and they're not critical. Since they're used for receiving, the voltage requirement is low, so almost any stable capacitors with the right capacitance should function OK.

NPO (COG) disc ceramic caps, MLC's with leads, MLC chips, and dipped mica caps should all be OK, if you can mount them easily. Tolerance hardly matters for these particular caps - 20% is close enough. Capacitors with such low values have a complex designation for tolerances, depending on the manufacturer and type - don't worry about it. If you don't have a 4.7 pf disc cap, but you have a 5 pf mica, go ahead and use that.

Suitable caps are available at various distributors, and they shouldn't cost much.

Good luck - if you need more help with the filter modules, please read my posted suggestions in the FILES section.

72
Carey
KX0R

> I'm missing both the 2.2pF and 4.7pF caps for the filter boards, can
> someone tell me what type/voltage these caps are supposed to be so i
> can find suitable replacements in my junk box?
>
>
> Matt
> KD8DAO
>
> P.S. I'm excited to get this thing on the air now that I'm near the
> end of building it.
>

2916. Re: Missing parts help

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-09 01:04:19 UTC
From: radio_kx0r
Topic: 2909 Message: 2916

--- In AT_Sprint@yahoogroups.com, "Steven Pituch" <list2@...> wrote:

If you're serious about parts and want to keep some stock around,
check out Dan's Parts. He has some good assortments. Not everything
is great, but he has many useful components at reasonable prices.

Carey
KX0R

> Hi Matt,
>
> I am also missing those parts as well as the two15 pf caps for the
modules.
>
> I just ordered a 190 part package from Diz, of Kits and Parts.
This is a
> great deal and I will use the other components for mods later on.
see:
> http://kitsandparts.com/
> Steve, W2MY
>
>
> ----- Original Message -----
> From: "Matt" <kd8dao@...>
> To: <AT_Sprint@yahoogroups.com>
> Sent: Tuesday, April 08, 2008 11:46 AM
> Subject: [AT_Sprint] Missing parts help
>
>
> > I'm missing both the 2.2pF and 4.7pF caps for the filter boards,
can
> > someone tell me what type/voltage these caps are supposed to be
so i
> > can find suitable replacements in my junk box?
> >
> >
> > Matt
> > KD8DAO
> >
> > P.S. I'm excited to get this thing on the air now that I'm near
the
> > end of building it.
> >
> >
> > ------------------------------------
> >

> > Yahoo! Groups Links
> >
> >
> >
> >
> > --
> > No virus found in this incoming message.
> > Checked by AVG.
> > Version: 7.5.519 / Virus Database: 269.22.9/1365 - Release Date:
4/8/2008
> > 7:30 AM
> >
> >
>

2917. Re: Help/suggestions needed

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-09 01:05:14 UTC
From: w6zuluhotel
Topic: 2912 Message: 2917

--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:

Thanks for the response, Mike:

> Since you don't hear the LO I would suggest double
> check all parts in that area. Especially the power
> supply and the SA612 mixer (orientation, as well as
> joints).

Done all that - and voltages on U2 are right on the money.

> I am assuming that you hear
> the morse code feedback, right?,

Yep, so the audio chain is not the prob.

> One thing that can work is to use a toothpick (non
> conductive) and press on the legs of the various IC's
> involved while listening. This can sometimes pinpoint
> a problem joint.

Haven't tried that (yet) - will do.

> Do you have a scope? or RF probe?

Yep - have a scope, but haven't used it on the 3B yet. What
should I be looking for and where? Using a regulated variable lab-
type power source set at 10.5 VDC.

Pete, W6ZH
w6zh@ix.netcom.com

2918. Re: Help/suggestions needed

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-09 04:21:52 UTC
From: radio_kx0r
Topic: 2912 Message: 2918

--- In AT_Sprint@yahoogroups.com, "w6zuluhotel" <w6zh@...> wrote:
>
> --- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@> wrote:

Pete,

1) Did you actually do all the steps prior to the "CO step", with a counter, etc., and get through all that OK?

2) Did your rig announce "CO"? You have to go through steps 1 through 7 and click the menu button to get the "CO" and that tone.

(For the rest of this note, please refer to the schematic in your manual)

U2 is your product detector and BFO. It's a double-balanced mixer with an oscillator on board.

You can verify if the BFO is working by using a scope on pins 6 and 7. Your probe on pin 6 may stop oscillation, but a good probe on pin 7 should reveal if crystal X5 is oscillating at 4.9152 Mhz. If you find no signal on your scope, try adjusting CT1 to see if the oscillator will run. This is your BFO frequency adjustment. If you still have no signal, try using a small capacitor, like 2 pf, on your probe to reduce the loading caused by the probe.

It's safer to probe the caps C11 and C12 than to probe the IC pins - be careful not so slip and short anything.

If the crystal is running, you should see some audio output - sine wave - on U2 pins 4 and 5. If the crystal isn't running, you should just see some weak noise. You can follow the audio through the chain to make sure it's working OK.

If none of this helps, try these general tips: 1) Isolate the problem by testing or probing relevant parts of the circuit - you want to narrow it down to one IC if possible 2) Use a very bright light and strong magnification to look for shorts or bridges. These can be hidden, and/or they can be tiny filaments, contaminants, or even some kind of defect in a board or component. Use a DMM to verify anything you think might be a short, if it's hidden, or the evidence points to it.

You haven't established that the entire audio chain is OK just because you hear the microcontroller sending code. The sidetone is injected part way down the chain. If you have audio coming out of U2 on pins 4 and 5, you'll need to find where it's not getting amplified

sown the chain of U3a, U5, U4, and U3b.

That's all I can think of without some more evidence.

One helpful hint:

On my schematic (and the revised "B" schematic posted here in the FILES) there is a reversal of the two audio lines between U2 and U3a. The board works fine, but some designators and the signal paths don't match the schematic I have. I believe the audio from U2 pin 4 actually ends up at U3a pin 3, and the audio from U2 pin 5 actually ends up at U3a pin 2. If you're probing that area you'll go nuts unless you know about this - it's just a drawing error - the board works fine. The two push-pull audio signals from U2 are 180 degrees out of phase, so there's no problem.

What about you Mike? We should be able to crack this one.

72/73
Carey
KX0R
>
> Thanks for the response, Mike:
>
> > Since you don't hear the LO I would suggest double
> > check all parts in that area. Especially the power
> > supply and the SA612 mixer (orientation, as well as
> > joints).
>
> Done all that - and voltages on U2 are right on the money.
>
> > I am assuming that you hear
> > the morse code feedback, right?,
>
> Yep, so the audio chain is not the prob.
>
> > One thing that can work is to use a toothpick (non
> > conductive) and press on the legs of the various IC's
> > involved while listening. This can sometimes pinpoint
> > a problem joint.
>
> Haven't tried that (yet) - will do.
>
> > Do you have a scope? or RF probe?
>
> Yep - have a scope, but haven't used it on the 3B yet. What
> should I be looking for and where? Using a regulated variable lab-
> type power source set at 10.5 VDC.
>
> Pete, W6ZH
> w6zh@...

>

2920. Re: [AT_Sprint] Re: Help/suggestions needed

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-09 13:51:44 UTC
From: Michael Harnage
Topic: 2912 Message: 2920

Excellent post Carey. Keepup the good work. Just saved
me a bunch of typing. :)

-mike/w1mt

--- radio_kx0r <careyfuller@...> wrote:
>
> What about you Mike? We should be able to crack
> this one.
>

Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

2925. Re:Trouble with new ATS-3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-10 05:27:28 UTC
From: David Packard
Topic: 2454 Message: 2925

I want to thank each of you that responded to my plea for assistance with my ATS-3a. You may recall that when I completed the kit, I found that the receiver was quite insensitive, although this condition could often be momentarily relieved by tapping on the pc board, and the transmitter did not transmit. I decided, as a preliminary to taking my radio to a friend, who had the lab equipment to follow the suggestions that I had received, to systematically reheat every solder connection in the radio. This effort had the happy effect of reviving the transmitter! It nows puts out 2.5 watts with a 9v power supply. I did not identify the specific problem. However, despite this success, the receiver showed no improvement.

Keith, WB2NVY, kindly inspected and experimented with the radio. He determined that I was not adjusting the trimmer caps on the filter boards correctly. The receiver now performs excellently and I enjoy using it very much. So, I now know how to adjust trimmer caps! Thank you Mike, VE3EQP/W4 for pointing out this possibility. I also give a special thank you to Carey KX0R for describing the signal path through the radio and where to test it. That guidance was very helpful.

I look forward to beginning work on my Bee, however, to complete the toroids for the ATS-3a filter boards, I had to borrow the number 32 magnet wire from my Bee kit. I am having trouble locating a supplier for this wire. Is there some other term for such wire or do you know where I might find it?

Many thanks and 72/73, Dave K1YHR.

2926. Re: Help/suggestions needed

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-10 18:09:14 UTC
From: w6zuluhotel
Topic: 2912 Message: 2926

To Mike, Carey et all: Many thanks for the suggestions - here's a recap and present status of my 3B project using the manual as guideline:
A) Check & calibration:
1) supply voltage: 10.2 VDC, regulated
2) TP1 voltage 3.976
3) "8" heard in Morse & 8 on display on pwr-up
4) dot & dash ok on keying
5) pwr removed & L3 installed
B) Ref Osc. freq calibration
1) step 3 - "CF" heard & "C" on display on pwr up
2) freq counter connected to TP1 & osc set to 10.000,000 MHz.
3) clicked "Menu" & heard "CO"
4) a change in background noise, but no "low tone".
C) Steps taken:
1) tweaked CT1 - no change
2) using "sniffer" receiver tuned to 4.9152 MHz - no sign that U2 osc is working.
3) all voltages on U1, U2 and U4 as specified.
4) inspected U1, U2 & U4 closely under bright light (full-spectrum CFL - these are great) and max magnification of two-stage visor magnifier - no shorts, bridges, unsolder joints could be spotted.
4) I have not used my scope to try to see if U2 is oscillating.
D) - Why?

Here's the status report section: at 11:44 PDT yesterday my long awaited Elecraft transceiver K3 kit was delivered. Effective as of then, all work on the ATS-3B will be postponed until K3 #657 is up and running - then back to work on the 3B - stay tuned, please - and again, many thanks to Mike, Carey and the others who have offered assistance.
de Pete, W6ZH

2927. Re:Trouble with new ATS-3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-11 05:01:10 UTC
From: radio_kx0r
Topic: 2454 Message: 2927

--- In AT_Sprint@yahoogroups.com, David Packard <dpackard@...> wrote:

Dave,

I have some #32 magnet wire. How much do you need? I can't remember
how much was in the A and B kits.

Is your QRZ address OK? I think I can just stick a few feet in an
envelope. Not much copper there!

You definitley need that #32 for the 80M receive toroid.
If you already found it let me know...

72/73

Carey
KX0R

> I want to thank each of you that responded to my plea for
assistance
> with my ATS-3a. You may recall that when I completed the kit, I
found
> that the receiver was quite insensitive, although this condition
could
> often be momentarily relieved by tapping on the pc board, and the
> transmitter did not transmit. I decided, as a preliminary to
taking my
> radio to a friend, who had the lab equipment to follow the
suggestions
> that I had received, to systematically reheat every solder
connection in
> the radio. This effort had the happy effect of reviving the
> transmitter! It nows puts out 2.5 watts with a 9v power supply. I
did
> not identify the specific problem. However, despite this success,
the
> receiver showed no improvement.
>
> Keith, WB2NVY, kindly inspected and experimented with the radio.
He
> determined that I was not adjusting the trimmer caps on the filter
> boards correctly. The receiver now performs excellently and I
enjoy
> using it very much. So, I now know how to adjust trimmer caps!
Thank
> you Mike, VE3EQP/W4 for pointing out this possibility. I also give
a

> special thank you to Carey KX0R for describing the signal path
through
> the radio and where to test it. That guidance was very helpful.
>
> I look forward to beginning work on my Bee, however, to complete
the
> toroids for the ATS-3a filter boards, I had to borrow the number 32
> magnet wire from my Bee kit. I am having trouble locating a
supplier
> for this wire. Is there some other term for such wire or do you
know
> where I might find it?
>
> Many thanks and 72/73, Dave K1YHR.
>

2928. Getting there.....

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-11 10:01:37 UTC
From: pswarman
Topic: 2928 Message: 2928

It's built now and I'm testing with 40 mtr band. Two silly errors so far, I imagine the first one is easy to make so this is to warn other new builders. On first switch on the current drain was VERY high, I switched off quickly. Tracing back from the +ve supply I found the 3.5v side of U10 was at ground and this lead me to inspect more closely local joints for solder bridges and there it was. I'd tagged one of the connections of the 60Mhz ref. oscillator to the metal top..... I recall it was tricky to solder to the board and obviously I wasn't careful enough!

The second error was again a soldering problem... the logic didn't recognise it was a 40mtr plug in, it thought it was 15Mtrs. On checking the voltage to j1-3 it was at zero.... that didn't seem right and following it back I could see that one side of R44 hadn't been properly soldered to the board.

The rig is now receiving my sig genny..... pity the band is dead over here!

This is good fun. Pity I'm back at work next week.

Paul, G0odp, sunny Poole, England

2929. Bee gets short shrift?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-13 22:46:20 UTC
From: J. Haynes
Topic: 2929 Message: 2929

I've been reading W3OSS's 2008 ARRL publication Low Power Communication, and although everything from K3 to Tuna Tin is explained at length, there is nary a jot nor tiddle of our Bee. Is she really that esoteric?
Jonathan
PS. Does this call for a candlelight vigil?

2930. ATS3b: Power out on 40m

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-13 23:09:42 UTC
From: Steven Pituch
Topic: 2930 Message: 2930

Hi all,
I was getting about 2.3 Watts out at 9Volt at the plug with the standard 17 turns on LF2 (30 ga) squeezed really tight. I tried adding the 150 pf to C2F per KX0R, but power went down considerably (abt .6 W) even after playing with the spacing of turns for LF1 and 2. So I took off the 150 pf cap and rewound LF2 with 19 turns 30 ga. Now I get 2.5 Watts out at 9 V and the turns on LF2 are not completely squeezed tight. This was all done on a dummy load.

However, if I go to 12.00 Volts at the plug, I just realized the output impedance changes and the inductances of LF1 and LF2 are no longer optimum. I was only geting 3.4 Watts out at 12 Volts at the plug.

By readjusting the turn spacing of LF1 and LF2 at 12 Volts, I was able to get about 4.2 Watts out into a dummy load and about 4.0 Watts out into the antenna. However if I try to squeeze the turns more to get more power out I trip the current sensor.

Any suggestions or comments?

Thanks,
Steve, W2MY

2931. Re: ATS3b: Power out on 40m

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-14 03:02:54 UTC
From: radio_kx0r
Topic: 2930 Message: 2931

--- In AT_Sprint@yahoogroups.com, "Steven Pituch" <list2@...> wrote:

Steve,

Sounds like you're having fun with your filter modules!
Experimenting is the key to getting the most from the rig.

Since my toroids were mostly wound with #26 wire, not #30, there will be some differences in optimum tuning and maybe in efficiency. #30 has a little bit more loss, but it offers a greater range of adjustment on the toroids, unless it breaks. I don't like #30, and that's why I went to #26, like what Steve supplied with the ATS-3A.

Toroids vary slightly from lot to lot. I count the turns by the number of wires passing through the core; this is the standard way to count them. I use a strong magnifier and count several times until I'm sure. Since the inductance varies considerably with adjustment, the exact number of turns is less important than the intuitive feel you get from adjusting the two coils back and forth while you watch the power output and the DC current being drawn.

I did raise my current trip point about 10% by adding a 5.6K resistor across R47. This was necessary in order to run the rig at 5W with 12V on the upper frequencies. I also tune ONLY into a bridge and use a resistor in series with the battery to limit the voltage and current while adjusting my tuner. This was discussed my several of us in earlier postings here.

With good adjustments, at 12.0V you shouldn't be above 0.8A DC in with 5W out on 15M, with an accurate 50 ohm load. That is my worst case. Current rises gradually with the frequency as you go from band to band. On 40M I get 5.2W out at 12.0V with only 0.65A. This is one amazing rig! I verified my WM-2 against a Norcal Dummy load with its diode detector. I also verified against another diode detector I have. The load must be accurate, and cables must be checked to make sure they're 50 ohms also.

My performance chart for all bands is posted in the FILES here - it's separate from the data on modifying the various modules.

I did all my adjustments with a 12.0V supply; but the efficiency and performance hold nicely with lower voltages on all bands. I get 2.9W or better on every band with a 9.0V supply. These voltages are measured at the connector on the board, but before the protection diode, so the final is actually seeing less voltage.

It's worth checking your current input, so you can see how much current trips the sensor. The sensor is tricky, since the rig's current goes up with supply voltage, adjustments to get more power out, and certain kinds of load mismatch. Even if you adjust your rig for 4W out at 12V, a minor mismatch might trip the sensor.

I think this rig really needs to have a good tuner, adjusted for a nearly perfect match, to behave properly; this is essential if you run on 12V. The rig doesn't fold back with SWR like commercial rigs, but it offers nice efficiency and low power consumption as a reward. Even a simple L network will make an ATS rig happy, provided it has a resistive bridge for tuning.

Good luck and lots of patience...

72/73

Carey
KX0R

> Hi all,
> I was getting about 2.3 Watts out at 9Volt at the plug with the standard 17 turns on LF2 (30 ga) squeezed really tight. I tried adding the 150 pf to C2F per KX0R, but power went down considerably (abt .6 W) even after playing with the spacing of turns for LF1 and 2. So I took off the 150 pf cap and rewound LF2 with 19 turns 30 ga. Now I get 2.5 Watts out at 9 V and the turns on LF2 are not completely squeezed tight. This was all done on a dummy load.
>
> However, if I go to 12.00 Volts at the plug, I just realized the output impedance changes and the inductances of LF1 and LF2 are no longer optimum. I was only geting 3.4 Watts out at 12 Volts at the plug.
>
> By readjusting the turn spacing of LF1 and LF2 at 12 Volts, I was able to get about 4.2 Watts out into a dummy load and about 4.0 Watts out into the antenna. However if I try to squeeze the turns more to get more power out I trip the current sensor.
>
> Any suggestions or comments?
>
> Thanks,
> Steve, W2MY
>

2932. Re: ATS3b: Power out on 40m

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-14 14:31:18 UTC
From: jaakko330
Topic: 2930 Message: 2932

--- In AT_Sprint@yahoogroups.com, "Steven Pituch" <list2@...> wrote:

> Any suggestions or comments?

Hi Steve,

The difference between 2.3 and 2.5 W is +0.36 dB and from 4.0 to 4.2 W
it is +0.21 dB. Difficult to hear the difference in normal band
conditions.

The effective battery series resistance limits also the output power.
Thus the trick to use 10 ohm in series to avoid tripping while tuning
the antenna.

Googling gave me this

http://www.renoqrp.org/qrp_works.html

73, Jaakko OH7BF/F5VGL

2933. New Steve Weber Design

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-14 15:03:32 UTC
From: Kurt Savegnago
Topic: 2930 Message: 2933

Hey,

Take a look at this Steve Weber designed radio that
is going to be offered by Hendricks Kits:

http://qrpkits.com/pfr3.html

20, 30 and 40 meters at 5 watts. Bigger than a 3b but
meant to be run on 12V and put out 5 watts. Built in
keyer and ATU too! Don't know the price yet.

Kurt KC9LDH

2934. Re: Power out on 40m (and othee questions)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-14 15:57:23 UTC
From: Steven Pituch
Topic: 2930 Message: 2934

Hi,
Jaako,
Thanks for the info on the 10 Ohm resistor. I certainly would like to reduce the power when tuning up.

I was looking for guidelines for changing capacitances and inductances in the output section as far as increasing the power. It seems my 40 meter module is not too bad. But I just finished the 80 meter and 20 meter modules, and even though they receive well, I am getting only about 2W out at 12 Volts.

I realize that this kind of adjustment is sort of dangerous not having a spectrum analyzer to check for harmonics. KX0R's work is very informative, but again he tested his changes for harmonics.

I am having a ball with W1MT's scanning software version of the ATS3b firmware. I have expanded the scanning widths to cover the entire cw portion of the bands and just leave it on in my office/shack. I have it hooked up to a pair of amplified computer speakers that have a volume control.

Last week, I had a major problem with the radio going deaf unpredictably while tuning. I have been resoldering around Q1 and Q2, and resoldered the 4 corner support posts so they are more perpendicular to the board. It has finally gone away and am now thoroughly enjoying listening to the rig. I tried responding to a strong station during the GA contest yesterday but with him going too fast and the confusion of his previous call he responded to being W2MC in NJ, he didn't recognize my transmission. I'm going to realign the rig once more as I think I adjusted CT1 after doing the LO frequency trim adjustment and fear I may be sending off frequency (not sure).

Does anyone know of a variable volume control like the ones on the cheap headphones, that is sold separately without the headphones. My Koss Plugs are really nice, but don't have a volume control.

72,
Steve, W2MY in Texas

2935. Re: [AT_Sprint] New Steve Weber Design

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-14 15:59:10 UTC
From: Michael Harnage
Topic: 2930 Message: 2935

Price is $200 plus $40 if you want the nifty paddle.

Check the schematics. It's basically an ATS rig for 3
bands with built-in tuner. Same restrictions apply to
it as to the ATS rigs regarding supply voltage and
power out. Steve did use a different MPU than the ATS
rigs so the firmware is won't be hardware compatible.

Nice package for those who want it all in one package.

-mike/w1mt

--- Kurt Savegnago <ksaves2@...> wrote:

> Hey,
>
> Take a look at this Steve Weber designed radio
> that
> is going to be offered by Hendricks Kits:
>
> http://qrpkits.com/pfr3.html
>
> 20, 30 and 40 meters at 5 watts. Bigger than a 3b
> but
> meant to be run on 12V and put out 5 watts. Built
> in
> keyer and ATU too! Don't know the price yet.
>

_____
Be a better friend, newshound, and
know-it-all with Yahoo! Mobile. Try it now.
http://mobile.yahoo.com/;_ylt=Ahu06i62sR8HDtDypao8Wcj9tAcJ

2936. Re: [AT_Sprint] Re: Power out on 40m (and othee questions)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-14 16:19:23 UTC
From: Michael Harnage
Topic: 2930 Message: 2936

For all,

Carey's writeup is excellent, please check the files
section of the group for it.

I do something similiar but a little different: Here
it is:

First, I "adjust turns" on LF2. (CF3/LF2 is a tuned
circuit that is designed to suppress the 2nd harmonic
(~14.08MHz for the 40M band)). Check out <
http://www.arrl.org/tis/info/pdf/9902044.pdf > for
more information on this type of circuit.

Then "adjust turns" on LF1 to get the power I want.

Adjust turns means to add/subtract OR compress/expand.
I used standard formulas to determine what the number
of turns should be given the current CF3. In no case
did I change the # of turns more that 2 turns from the
designed values.

For the receiver filter parts you need to do similiar
calculations and may need to add some capacitance to
the tank circuits there. It's a double tuned front end
filter so check both. Again Carey's write up is great
for this area.

I don't give exact numbers as I believe that this
exercise if useful for anyone getting this far into
modding there ATS rig.

Always double check current draw. I have actually
adjusted LF1 to lower power out in some cases. :)

-mike/w1mt

--- Steven Pituch <list2@...> wrote:

> I was looking for guidelines for changing
> capacitances and inductances in
> the output section
>

_____
Be a better friend, newshound, and
know-it-all with Yahoo! Mobile. Try it now.
http://mobile.yahoo.com/;_ylt=Ahu06i62sR8HDtDypao8Wcj9tAcJ

2937. Re: [AT_Sprint] Re: Power out on 40m (and othee questions)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-14 18:33:25 UTC
From: Michael Harnage
Topic: 2930 Message: 2937

Went back and checked my notes and realized that I did
indeed change CF3 for my 3B. More inline with older
ATS designs. Here is what I did:

Band/CF3
80m /220pF
40m /100pF
30m /68pF
20m /47pF
17m /39pF
15m /33pF

With these values I did not have to alter the turns on
LF1 and LF2 much to achieve my goals.

-mike/w1mt

--- Michael Harnage <w1mt@...> wrote:

> I used standard formulas to determine what the
> number
> of turns should be given the current CF3. In no case
> did I change the # of turns more that 2 turns from
> the
> designed values.

Be a better friend, newshound, and
know-it-all with Yahoo! Mobile. Try it now.
http://mobile.yahoo.com/;_ylt=Ahu06i62sR8HDtDypao8Wcj9tAcJ

2938. Re: [AT_Sprint] Re: Power out on 40m (and othee questions)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-14 19:31:04 UTC
From: Steven Pituch
Topic: 2930 Message: 2938

Hi MIke,
Thanks, that's sort of what I was looking for. This way I can see how much leeway I have in making any changes.
72,
Steve, W2MY

----- Original Message -----
From: "Michael Harnage" <w1mt@...>
To: <AT_Sprint@yahoogroups.com>
Sent: Monday, April 14, 2008 1:33 PM
Subject: Re: [AT_Sprint] Re: Power out on 40m (and othee questions)

> Went back and checked my notes and realized that I did
> indeed change CF3 for my 3B. More inline with older
> ATS designs. Here is what I did:
>
> Band/CF3
> 80m /220pF
> 40m /100pF
> 30m /68pF
> 20m /47pF
> 17m /39pF
> 15m /33pF
>
> With these values I did not have to alter the turns on
> LF1 and LF2 much to achieve my goals.
>
> -mike/w1mt

2939. Re: Power out on 40m (and othee questions)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-15 06:19:50 UTC
From: radio_kx0r
Topic: 2930 Message: 2939

--- In AT_Sprint@yahoogroups.com, "Steven Pituch" <list2@...> wrote:

Steve,

There is a photo of all six of my filter modules posted in the Photos section. If you go to the LARGE view, you can count the turns and how the toroids are wound and spread. This may explain some of our different results.

Otherwise we have to wonder about other kinds of errors. The power supply must be well-regulated - not a small battery - with short leads, etc. for any of these comparisons to be valid. The load must be 50 ohms, the cables 50 ohms, etc.

The "B" will easily put out over 6 watts on the lower frequencies, if you defeat the current limit, with a 12V supply. When adjusting it's easy to go right over 5 watts if you have everything going right. The efficiency can be better with 4.5W out.

Mike's approach is actually more sophisticated than my intuitive cut-and-try process of iterations.

I do know that you won't see the harmonics rise much unless you radically alter the output networks. Tuning for maximum efficiency with high output assures that the harmonics are controlled well enough.

I increased C4F on the 17M and 15M modules, because I put a scope on the final drains, and the voltage peaks were near the 60V limit for the devices. I got both better output and less peak drain voltage on 18 and 21 Mhz with more capacitance at the drains. My hunch is that if C4F is too low, the hard-driven mosfets are trying to switch almost like into an inductor, which tends to cause voltage spikes. I don't really understand this mod well, but it does work OK. I was lucky on this one.

Thanks Mike!

72/73

Carey KX0R

> Hi MIke,
> Thanks, that's sort of what I was looking for. This way I can see how much
> leeway I have in making any changes.
> 72,
> Steve, W2MY

>
> ----- Original Message -----
> From: "Michael Harnage" <w1mt@...>
> To: <AT_Sprint@yahoogroups.com>
> Sent: Monday, April 14, 2008 1:33 PM
> Subject: Re: [AT_Sprint] Re: Power out on 40m (and othee questions)
>
>
> > Went back and checked my notes and realized that I did
> > indeed change CF3 for my 3B. More inline with older
> > ATS designs. Here is what I did:
> >
> > Band/CF3
> > 80m /220pF
> > 40m /100pF
> > 30m /68pF
> > 20m /47pF
> > 17m /39pF
> > 15m /33pF
> >
> > With these values I did not have to alter the turns on
> > LF1 and LF2 much to achieve my goals.
> >
> > -mike/w1mt
>

2940. Re: Power out on 40m (and othee questions)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-15 06:38:34 UTC
From: radio_kx0r
Topic: 2930 Message: 2940

--- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@...>
wrote:

I just realized I said something confusing near the end if the last post - I mentioned C4F being increased for 18 and 21 Mhz, but that's a direct result of C1F being increased. C1F is the cap near the mosfet final drains. I found that if C1F is increased, then C4F must also be increased.

On Steve Weber's chart in the ATS-3B manual, C1F is 220 pf for 30 meters, 150 pf for 20M, and then it drops to only 22 pf for 17M and 15M. This didn't seem right to me, for such a small change in frequency, since most of the other values reduce gradually as frequency rises. So I arrived at values that worked better, I think, but I don't understand the network as well as Mike. I don't think I messed with C3F much, except once or twice, to see what happened. I actually think the rig is safer with some increase to C1F on 17 and 15 meters. I only have a 100 Mhz scope and a 10X probe, so hopefully one of you with a really fast scope can look at the drains and see what's actually happening. The probe ground return to the pcb must be very short.

It's late guys ...

72

Carey
KX0R
>
> --- In AT_Sprint@yahoogroups.com, "Steven Pituch" <list2@> wrote:
>
> Steve,
>
> There is a photo of all six of my filter modules posted in the
Photos
> section. If you go to the LARGE view, you can count the turns and
> how the toroids are wound and spread. This may explain some of our
> different results.
>
> Otherwise we have to wonder about other kinds of errors. The power
> supply must be well-regulated - not a small battery - with short
> leads, etc. for any of these comparisons to be valid. The load
must
> be 50 ohms, the cables 50 ohms, etc.
>
> The "B" will easily put out over 6 watts on the lower frequencies,

if
> you defeat the current limit, with a 12V supply. When adjusting
it's
> easy to go right over 5 watts if you have everything going right.
> The efficiency can be better with 4.5W out.
>
> Mike's approach is actually more sophisticated than my intuitive
cut-
> and-try process of iterations.
>
> I do know that you won't see the harmonics rise much unless you
> radically alter the output networks. Tuning for maximum efficiency
> with high output assures that the harmonics are controlled well
> enough.
>
> I increased C4F on the 17M and 15M modules, because I put a scope
on
> the final drains, and the voltage peaks were near the 60V limit for
> the devices. I got both better output and less peak drain voltage
on
> 18 and 21 Mhz with more capacitance at the drains. My hunch is
that
> if C4F is too low, the hard-driven mosfets are trying to switch
> almost like into an inductor, which tends to cause voltage spikes.
I
> don't really understand this mod well, but it does work OK. I was
> lucky on this one.
>
> Thanks Mike!
>
> 72/73
>
> Carey KX0R
>
>
> > Hi MIke,
> > Thanks, that's sort of what I was looking for. This way I can
see
> how much
> > leeway I have in making any changes.
> > 72,
> > Steve, W2MY
> >
> > ----- Original Message -----
> > From: "Michael Harnage" <w1mt@>
> > To: <AT_Sprint@yahoogroups.com>
> > Sent: Monday, April 14, 2008 1:33 PM
> > Subject: Re: [AT_Sprint] Re: Power out on 40m (and othee
questions)
> >

> >
> > > Went back and checked my notes and realized that I did
> > > indeed change CF3 for my 3B. More inline with older
> > > ATS designs. Here is what I did:
> > >
> > > Band/CF3
> > > 80m /220pF
> > > 40m /100pF
> > > 30m /68pF
> > > 20m /47pF
> > > 17m /39pF
> > > 15m /33pF
> > >
> > > With these values I did not have to alter the turns on
> > > LF1 and LF2 much to achieve my goals.
> > >
> > > -mike/w1mt
> >
>

2941. Re: [AT_Sprint] Re: Power out on 40m (and othee questions)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-15 10:41:50 UTC
From: Michael Harnage
Topic: 2930 Message: 2941

I remember wondering the same thing about CF1 and
increased it proportionately for 17m and 15m like
Carey. I did not increase CF4 but probably should go
back and look at the drain results on a scope.

Don't go thinking I know what I am talking about, I
just know how to Google and find stuff that helps me
try to understand what Steve has done on these rigs.
He is the true wiz for this rig. :)

-mike

--- radio_kx0r <careyfuller@...> wrote:

> --- In AT_Sprint@yahoogroups.com, "radio_kx0r"
> <careyfuller@...>
> wrote:
>
> I just realized I said something confusing near the
> end if the last
> post - I mentioned C4F being increased for 18 and 21
> Mhz, but that's
> a direct result of C1F being increased. C1F is the
> cap near the
> mosfet final drains. I found that if C1F is
> increased, then C4F must
> also be increased.
>
> On Steve Weber's chart in the ATS-3B manual, C1F is
> 220 pf for 30
> meters, 150 pf for 20M, and then it drops to only 22
> pf for 17M and
> 15M. This didn't seem right to me, for such a small
> change in
> frequency, since most of the other values reduce
> gradually as
> frequency rises. So I arrived at values that worked
> better, I think,
> but I don't understand the network as well as Mike.

Be a better friend, newshound, and
know-it-all with Yahoo! Mobile. Try it now.
http://mobile.yahoo.com/;_ylt=Ahu06i62sR8HDtDypao8Wcj9tAcJ

2942. Re: [AT_Sprint] Re: Power out on 40m (and othee questions)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-15 11:55:23 UTC
From: Steven Pituch
Topic: 2930 Message: 2942

Thanks Mike and Carey for the advice on the filter mods. I now have a pretty large file of ATB3b printed material for reference. For now I put the rig in scan mode and listen to the receiver while working in my office. When I have a bit of time and am not rushed, I will examine very carefully each band module and slowly make adjustments until I am satisfied with each one. I think Carey said in his writeup that he spent more time adjusting the modules than time spent on building the rig. I have to believe that that is the way to go.

Thanks and 72,
Steve

2943. Re:Re: [AT_Sprint] Re: Power ou t on 40m (and othee questions)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-15 12:16:52 UTC
From: J. Haynes
Topic: 2943 Message: 2943

I was snoozing-is scan mode part of a firmware update? How's it entered?

2944. Re: Power out on 40m (and othee questions)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-15 13:30:23 UTC
From: Steven Pituch
Topic: 2943 Message: 2944

Hi J.,
See:
For scanning software see:
http://w1mt.qrpradio.com/ats3.html

For building the cable see:

http://groups.yahoo.com/group/AT_Sprint/message/1869

http://groups.yahoo.com/group/AT_Sprint/message/1884

72,
Steve, W2MY

----- Original Message -----
From: "J. Haynes" <eggs.4.iggs@softbank.ne.jp>
To: <AT_Sprint@yahoogroups.com>; <list2@...>
Sent: Tuesday, April 15, 2008 7:16 AM
Subject: Re:Re: [AT_Sprint] Re: Power out on 40m (and othee questions)

>I was snoozing-is scan mode part of a firmware update? How's it entered?

2945. Re: New Steve Weber Design

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-15 14:26:48 UTC
From: Stephen Krosner
Topic: 2930 Message: 2945

I just looked at the Hendricks kit but I am not that familiar with the ATS-3x schematic. Is this kit similar to the Bee? If so, will it be able to support the PSK mode? Steve K2ZPF

2946. Re: [AT_Sprint] Re: New Steve Weber Design

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-15 14:57:45 UTC
From: Hank Greeb
Topic: 2930 Message: 2946

Steve:

The simple answer is " highly probable." But, since it uses a different CPU than the ATS-3 the code will be a bit different.

The tricky part is similating PSK-31 on a rig with a Class C or E final (NOT a linear final). You don't just start with a low level signal at the RF level and then amplify it. It takes some "tricks" to get the Class E amplifier to "look like" it's a linear amplifier.

I'm sure the gurus who came up with PSK-31 simulation on the ATS-3a and b can figure out the subtle differences for the new CPU.

72/73 de n8xx Hg

Stephen Krosner wrote:
>
> I just looked at the Hendricks kit but I am not that familiar with the
> ATS-3x schematic. Is this kit similar to the Bee? If so, will it be
> able to support the PSK mode? Steve K2ZPF
>

2947. Re:[AT_Sprint] Re: Power out on 40m (and othee questions)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-15 22:01:55 UTC
From: J. Haynes
Topic: 2947 Message: 2947

Thanks for the links, OM.
7J1AWL

2948. Re:[AT_Sprint] Re: Power out on 40m (and othee questions)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-15 22:12:19 UTC
From: J. Haynes
Topic: 2947 Message: 2948

Carey,
I found the 'large' they of your filter mods to be still on the lo-res side. Could you upload the fullsize shots to the ATS group on Flickr?
Jonathan

2949. Re:Re:[AT_Sprint] Re: Power out on 40m (and othee questions)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-15 22:16:35 UTC
From: J. Haynes
Topic: 2949 Message: 2949

...Large VIEW, I meant.

Predictive text messed me up.

2950. Re: Power out on 40m (and othee questions)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-16 09:13:50 UTC
From: jaakko330
Topic: 2930 Message: 2950

--- In AT_Sprint@yahoogroups.com, "Steven Pituch" <list2@...> wrote:

Hi Steven,

2 W is a little too low with 12 V.

Here is my copy-and-paste from SOTA reflector. Main thing is to see if there is dramatic difference between bands or if only small fine tuning would be needed on some bands. I have used the FT817ND almost always with 2.5 W, so I thought that around 4 W from ATS3B would be fine.

---start copy
For comparison my results for FT817ND with internal battery using Elecraft DL1 (about 10 % accuracy). CW signal and power set to 2.5/5.0 W nominal. Battery display shows 9.8 V in receive.

80 m 2.0 W/3.8 W
40 m 2.4 W/4.8 W
30 m 2.4 W/4.6 W
20 m 2.3 W/4.7 W
17 m 2.3 W/4.6 W
15 m 2.4 W/4.4 W
2 m 2.5 W/3.0 W

Actually I bought the DL1 to test ATS3B, so here are the results for that too. 8xAA alcaline battery (now 11.8 V) and 9 V battery were used. The total TX+RX current consumption is for the 9 V battery.

80 m 3.2 W/2.0 W/360 mA
40 m 3.1 W/2.0 W/430 mA
30 m 3.8 W/2.5 W/480 mA
20 m 3.9 W/2.5 W/530 mA
17 m 3.7 W/2.3 W/470 mA
15 m 3.5 W/2.2 W/470 mA

I think I will not bother to optimize the power more now.
---end copy

73, Jaakko OH7BF/F5VGL

2951. ATS-3B w/Touch Keyer

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-17 04:00:46 UTC
From: Jim Fraser
Topic: 2951 Message: 2951

Hi Gang,

I am in the process of wiring up my 3B in its enclosure. I have a touch keyer that will be included in the package. I do have one question for anyoine who has also integrated the touch keyer into their 3B. I plan to connect the output of the touch keyer module into the paddle inputs on the 3B. I have two key jacks one for my paddles and one for the touch pads, so I can have a choice. Will having the touch keyer connected cause any problem when running with paddles? Do I need to disconnect the touch keyer output from the 3B paddle inputs when using paddles?

Jim K6JF

2952. Re: ATS-3B w/Touch Keyer

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-17 04:16:34 UTC
From: kc7fys
Topic: 2951 Message: 2952

Jim,
My results might be helpful. Your approach is a bit more flexible than
mine, so I look forward to seeing your results, too.
Photos:<http://www.flickr.com/photos/jonathancharles/2287825177/>
Video: <http://www.youtube.com/watch?v=yqnt2zUpJcw>
Jonathan KC7FYS

2953. Re: Power out on 40m (and othee questions)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-17 04:25:50 UTC
From: radio_kx0r
Topic: 2930 Message: 2953

--- In AT_Sprint@yahoogroups.com, "jaakko330" <oh7bf@...> wrote:
>
> --- In AT_Sprint@yahoogroups.com, "Steven Pituch" <list2@> wrote:
>

Nice results Jaakko,

I also have an FT817ND here, and I found that the output is very close to 5 watts when set for maximum and run either from a 12V lead-acid battery or a regulated supply. I believe that the FT817ND employs power leveling. The output is almost the same on all the HF bands, and it doen't vary much as the supply voltage is dropped. I think your battery may be a little too low to make it roll back and limit at 5W. Some others claim that 10.5V, measured key-down, is optimum for the FT817ND at 5 watts.

I believe the DL1 can provide accurate measurments, based on how it works.

The ATS-3B is completely different from the FT817ND, in that the power output is approximately proportional to the square of the power supply voltage. It doesn't level - it leaps as the voltage is raised! This is why it's risky to run with more than 12.0 volts.

Since you didn't mention whether your transmit voltage is measured key down, I'm wondering what your actual voltage input is. 8 AA alkaline cells will run the ATS-3B very well, but I doubt that the voltage key-down is really quite 12.0V .

Power measurements and comparisons are best done with regulated power supplies. Not only is the voltage held constant through the keying cycle, but many supplies offer current limiting, which is helpful protection when doing experiments.

Your results indicate that you did a good job of adjusting your toroids. If you wanted to spend more time, I believe that you could get just as much power out on 80M and 40M as on any other band. The clue is that your current drain is so low at low frequencies - plenty of room to work with there. Unfortunately the toroids with more turns wound closely have much less of a range of adjustment, and on 80 meters, turns may have to be added or subtracted, or capacitors adjusted, in order to make significant changes. The only change I made from Steve's recommendations for the 80M transmit filter was to use #28 wire instead of #30 for LF1; I still had 23 turns. Of course your results may vary. It's pretty easy to experiment with capacitors C1, C2, and C4, just to see if the rig wants to put out a little more power. Try adding 47 pf or 100 pf to each, one at a

time, while watching the output and current draw. Just tack-solder the extra cap on so it doesn't slip.

The ATS rigs are slightly more efficient at lower frequencies, so I'm pretty sure you'll succeed at optimizing 40 and 80. Pushing 15 meters is more like rolling dice...

We have several inches of new snow here tonight, after 80 degrees yesterday afternoon. Typical Colorado spring weather.

72

Carey
KX0R

> Hi Steven,
>
> 2 W is a little too low with 12 V.
>
> Here is my copy-and-paste from SOTA reflector. Main thing is to see if
> there is dramatic difference between bands or if only small fine
> tuning would be needed on some bands. I have used the FT817ND almost
> always with 2.5 W, so I thought that around 4 W from ATS3B would be fine.
>
> ---start copy
> For comparison my results for FT817ND with internal battery using
> Elecraft DL1 (about 10 % accuracy). CW signal and power set to 2.5/5.0
> W nominal. Battery display shows 9.8 V in receive.
>
> 80 m 2.0 W/3.8 W
> 40 m 2.4 W/4.8 W
> 30 m 2.4 W/4.6 W
> 20 m 2.3 W/4.7 W
> 17 m 2.3 W/4.6 W
> 15 m 2.4 W/4.4 W
> 2 m 2.5 W/3.0 W
>
> Actually I bought the DL1 to test ATS3B, so here are the results for
> that too. 8xAA alcaline battery (now 11.8 V) and 9 V battery were
> used. The total TX+RX current consumption is for the 9 V battery.
>
> 80 m 3.2 W/2.0 W/360 mA
> 40 m 3.1 W/2.0 W/430 mA
> 30 m 3.8 W/2.5 W/480 mA
> 20 m 3.9 W/2.5 W/530 mA
> 17 m 3.7 W/2.3 W/470 mA
> 15 m 3.5 W/2.2 W/470 mA
>

> I think I will not bother to optimize the power more now.
> ---end copy
>
> 73, Jaakko OH7BF/F5VGL
>

2954. Re: [AT_Sprint] ATS-3B w/Touch Keyer

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-17 11:03:27 UTC
From: Vojtěch Bubník
Topic: 2951 Message: 2954

> Will having the touch keyer
> connected cause any problem when running with paddles? Do I need to
> disconnect the touch keyer output from the 3B paddle inputs when using
> paddles?

You do not need to disconnect the touch paddles. At the output of touch paddles there are 2n7000 with open drain. You could safely connect a switch parallel to the FET.

73, Vojtech OK1IAK

2955. Re: ATS-3B w/Touch Keyer

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-17 16:44:16 UTC
From: Jim Fraser
Topic: 2951 Message: 2955

Jonathon:

I felt that I would prefer to use paddles when at home and the touch pads in the field. I did not want to be lugging the Bencher around due to its weight.

When I get to building the touch pad base it will also include 3 tactile switches like those on the 3B for the Menu, Tune Up and Tune Down functions. I have a 4-conductor jack on the enclosure for this purpose for the 3 switch inputs and ground. This way I can check my frequency and tune from the touch pad base.

Jim K6JF

--- In AT_Sprint@yahoogroups.com, "kc7fys" <kc7fys@...> wrote:
>
> Jim,
> My results might be helpful. Your approach is a bit more flexible than
> mine, so I look forward to seeing your results, too.
> Photos:<http://www.flickr.com/photos/jonathancharles/2287825177/>
> Video: <http://www.youtube.com/watch?v=yqnt2zUpJcw>
> Jonathan KC7FYS
>

2956. Re: [AT_Sprint] Re: ATS-3B w/Touch Keyer

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-17 17:43:55 UTC
From: Steven Pituch
Topic: 2951 Message: 2956

Instead of flat pads you can put them in a configuration like a conventional paddle. I have two examples at:
http://www.pituch.net/p/Steve's%20Page/Radio/SW40+/SW40+.html

Steve,
W2MY

2957. Re: ATS-3B w/Touch Keyer

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-17 18:06:55 UTC
From: Jim Fraser
Topic: 2951 Message: 2957

Steve,

I was originally planning to use flat pads, but found that I kept
trying to rest my fingers on them causing keying errors. So, I will do
some sort of the vertical pad arrangement.

Jim K6JF

planning to something similar to
--- In AT_Sprint@yahoogroups.com, "Steven Pituch" <list2@...> wrote:
>
> Instead of flat pads you can put them in a configuration like a
conventional
> paddle. I have two examples at:
> http://www.pituch.net/p/Steve's%20Page/Radio/SW40+/SW40+.html
>
> Steve,
> W2MY
>

2958. Re:[AT_Sprint] Re: ATS-3B w/Tou ch Keyer

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-17 22:15:03 UTC
From: J. Haynes
Topic: 2958 Message: 2958

That's an ambitous touch key concept. I didn't like mine at first, but found it useful once pressed into service. It requires a bit of thumb moistening so's not to drop dits, and can't compare to good field paddles. But one less peripheral is quite nice.
7J1AWL

2959. Re: Power out on 40m (and othee questions)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-18 13:10:15 UTC
From: jaakko330
Topic: 2930 Message: 2959

Hi Carey,

Thanks for the comprehensive instructions. I need to try the capacitors on the 40 m and 80 m bands.

73, Jaakko OH7BF/F5VGL

2960. PA0FBK's interesting ham page and a question.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-18 23:14:56 UTC
From: kc7fys
Topic: 2960 Message: 2960

I found this <http://www.dxzone.com/cgi-bin/dir/jump2.cgi?ID=16540> interesting ham radio page over on QRPp list. I like the small field-deployable matching tuner in particular, but there are several novel QRP ideas on the page.

I have a request, too. I want to update my firmware--I gather that the current version is V3, correct? Once a guy's set up to do it, it's just a matter of moments in the execution, right? If so, I'd like to just bundle up my Bee and send it to somebody on the list here to do the update. Of course I'll include a small omiyage (souvenir) from JA1 with the return postage as well. Drop me a note if you would like to update my firmware. I'm simply not outfitted to do it myself.

And thirdly--this is a sort of simple question, but I wonder what y'all have been doing. I think it's fairly typical operation with the 3B to keep an 8-10 cell AA pack and 9V battery on hand--one for reduced power on tune-up, and the other for when the SWR is low. I was envisioning some kind of switch on my cheepy battery pack that would just switch me to lower power, instead of swapping out batteries. I already put a little toggle <http://farm3.static.flickr.com/2123/2424297720_0b48f37634_b.jpg> on, that has turned out to be very useful. What do you others do when you need fewer volts?

Jonathan KC7FYS/7J1

2961. Re: PA0FBK's interesting ham page and a question.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-19 02:31:24 UTC
From: radio_kx0r
Topic: 2960 Message: 2961

--- In AT_Sprint@yahoogroups.com, "kc7fys" <kc7fys@...> wrote:

Jonathan,

Comments:

1) Great website - real ham radio with spirit; oriented toward true portable operation. No doubt the Z-Match tuner does many things well and allows operating on many bands with minimum hardware.

I built a Z-Match version of the BLT. Mine tunes 1.8 to 30 Mhz, with a single DPDT range switch. While it's an amazing tuner, the problem with the Z-Match is that it tends to have poor balance on the higher frequencies. This is due to capacitive coupling between the close toroid windings and the inherent assymmetry of the device. While I'm proud of my Z-Match's range, I did measurements with split balanced loads and proved that the balance is terrible on the higher frequencies. This means in practice that the Z-Match may deliver a seemingly nice match, but it's operating in common mode, so your lovely "balanced" antenna is operating as a T, with the feedline and horizontal wires fed single-phase against ground! This is particularly likely when the balanced line presents a high impedance in balanced mode - which is often true with these multiband systems. I like these kinds of systems and use them, but I mostly use one of my modified BLT's. These do much better on the balance tests. On the other hand, the Z-match is sweet if you plan to work with low feed impedances.

The double-tuned resonant circuit concept used in the Z-Match is many decades old, yet it has great potential for QRP tuners. There are probably configurations yet to be developed that may have better performance.

2) I know it sounds dumb, but the idea of using a resistor in series with the battery pack has merit. The ATS-3B really works fine with a 12V battery and a series resistor. I use 6.7 ohms with a switch on the 3-cell lithium pack. It would work just as well on an 8-cell alkaline pack. 10 alkalines is too much for the rig without a resistor or other regulator. Another great option is a series regulator, such as a low-dropout type. The resistor is compact and simple, and my rig likes it. Most QRP rigs won't work well with added resistance - this rig is different. Matching is easier and safer. This is a better idea than using fewer cells in the battery, since the current is limited more by the added resistance.

Another problem with changing the number of cells in that they don't discharge uniformly. This is a problem with all rechargeable cells,

and a disaster with lithium.

When someone else posted the resistor idea here, I thought it was dumb, and so I tried it and did various tests to see what it messed up on the ATS-3B transmitter! I couldn't find anything wrong with the keying, the spectrum, the break-in, or the digital stuff. The only problem is that if the resistor is too large, like more than about 10 ohms - more or less - the transmitter might not get enough voltage key-down, and then it could misbehave. It needs about 6 volts key-down. The voltage and current vary with the load, so this could be tricky. 6.7 ohms is real nice with a 12 volt battery.

Try it - you'll like it...cheap insurance, and safer matching when tuning unknowm antennas.

72

Carey
KX0R

> I found this <http://www.dxzone.com/cgi-bin/dir/jump2.cgi?
ID=16540>
> interesting ham radio page over on QRPp list. I like the small
> field-deployable matching tuner in particular, but there are several
> novel QRP ideas on the page.
>
> I have a request, too. I want to update my firmware--I gather that
the
> current version is V3, correct? Once a guy's set up to do it, it's
just
> a matter of moments in the execution, right? If so, I'd like to just
> bundle up my Bee and send it to somebody on the list here to do the
> update. Of course I'll include a small omiyage (souvenir) from JA1
with
> the return postage as well. Drop me a note if you would like to
update
> my firmware. I'm simply not outfitted to do it myself.
>
> And thirdly--this is a sort of simple question, but I wonder what
y'all
> have been doing. I think it's fairly typical operation with the 3B
to
> keep an 8-10 cell AA pack and 9V battery on hand--one for reduced
power
> on tune-up, and the other for when the SWR is low. I was envisioning
> some kind of switch on my cheepy battery pack that would just
switch me
> to lower power, instead of swapping out batteries. I already put a
> little toggle
> <http://farm3.static.flickr.com/2123/2424297720_0b48f37634_b.jpg>
on,

> that has turned out to be very useful. What do you others do when
you
> need fewer volts?
>
> Jonathan KC7FYS/7J1
>

2962. Re: PA0FBK's interesting ham page and a question.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-19 04:07:29 UTC
From: Tim Keene
Topic: 2960 Message: 2962

I use to also have two battery packs. One was a 9.6V, 8AA pack and the other was a 12V pack with 6 Cyclone batteries, both with the regular 12v coaxial pwr connector on them. All I had to do was unplug from one to the other but I feel your "pain". Now I have everthing in one box. Its not really a "trail" rig but it is very portable and works for my situation. I posted new pixs under my callsign in the photo section.
Good Luck
Tim - K5DEZ

--- In AT_Sprint@yahoogroups.com, "kc7fys" <kc7fys@...> wrote:
>
> I found this <http://www.dxzone.com/cgi-bin/dir/jump2.cgi?ID=16540>
> interesting ham radio page over on QRPp list. I like the small
> field-deployable matching tuner in particular, but there are several
> novel QRP ideas on the page.
>
> I have a request, too. I want to update my firmware--I gather that the
> current version is V3, correct? Once a guy's set up to do it, it's just
> a matter of moments in the execution, right? If so, I'd like to just
> bundle up my Bee and send it to somebody on the list here to do the
> update. Of course I'll include a small omiyage (souvenir) from JA1 with
> the return postage as well. Drop me a note if you would like to update
> my firmware. I'm simply not outfitted to do it myself.
>
> And thirdly--this is a sort of simple question, but I wonder what y'all
> have been doing. I think it's fairly typical operation with the 3B to
> keep an 8-10 cell AA pack and 9V battery on hand--one for reduced power
> on tune-up, and the other for when the SWR is low. I was envisioning
> some kind of switch on my cheepy battery pack that would just switch me
> to lower power, instead of swapping out batteries. I already put a
> little toggle
> <http://farm3.static.flickr.com/2123/2424297720_0b48f37634_b.jpg> on,
> that has turned out to be very useful. What do you others do when you

> need fewer volts?
>
> Jonathan KC7FYS/7J1
>

2963. Enclosure for ATS-3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-19 05:38:58 UTC
From: lownslow1601
Topic: 2963 Message: 2963

It's time to put my ATS-3a into an enclosure. I would like to hear from anyone who has tried the Altoid-sized enclosure from American Morse. Among other things, I wonder if it is difficult to make holes for controls and control shafts, due to the heavier walls.

72/73, Dave K1YHR.

2964. K5DEZ "The Next Generation"

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-19 08:11:20 UTC
From: kc7fys
Topic: 2964 Message: 2964

Compliments on your ATS3b setup, man.
First it was the Planters Cashews, now a sort of Star Trek-esque
Spacelunch Box.
1
<http://ph.groups.yahoo.com/group/AT_Sprint/photos/view/949b?b=7&m=f&o=0\
> 2
<http://ph.groups.yahoo.com/group/AT_Sprint/photos/view/949b?b=8&m=f&o=0\
> 3
<http://ph.groups.yahoo.com/group/AT_Sprint/photos/view/949b?b=9&m=f&o=0\
>
Putting the QBSA and Bee in the same housing is definitely a smooth
move.
Jonathan

2965. Re: PA0FBK's interesting ham page and a question.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-19 14:55:40 UTC
From: Steven Pituch
Topic: 2960 Message: 2965

HI Jonathan,
First off I want to tell you that I really enjoyed your pictures on the Net. I studied the ATS3b pictures very closely before starting to build mine.

I am new at this but I needed to reflash my ROM after building my ATS3b. I made a cable in an hour using an old centronics parrallel printer cable and 7-220 Ohm resistors. It is very easy to do. After reflashing the ROM I eventually reflashed it again with W1MT's SW and now have scanning capability on my ATS3b. I even changed the scanning to go down to the bottom of the etxra band on all frequencies by just changing a few constants in the text file. It is very easy to do. I suggest you build the cable and do it yourself. It would save you lots of time, and as mods in the formware become available you can reflash the ROM in a few minutes.

Here are the emails about the cable.
http://groups.yahoo.com/group/AT_Sprint/message/1871
http://groups.yahoo.com/group/AT_Sprint/message/1884
Here is W1MTs site with the alternate firmware.
http://w1mt.qrpradio.com/

Regards,
Steve, W2MY

2966. Re:[AT_Sprint] Re: PA0FBK's int eresting ham page and a questio n.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-19 15:02:24 UTC
From: J. Haynes
Topic: 2966 Message: 2966

Thanks. I went to Tokyo for a cable today, but need to pick up the resistors. I'll document.
Jonathan

2967. Tomorrow night is RFTB !!!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-20 02:00:30 UTC
From: Larry Makoski W2LJ
Topic: 2967 Message: 2967

Tomorrow night is "Run For The Bacon" night. The monthly QRP Sprint sponsored by the Flying Pigs QRP Club International.

For full details, please visit http://www.gentzow.com/fpqrp/fpqrprun.php

73 de Larry W2LJ
FP #612

2968. Re: Enclosure for ATS-3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-20 04:34:42 UTC
From: ve3wmb
Topic: 2963 Message: 2968

Dave :

Checkout the photo section of this group in the VE3WMB ATS-3A folder.

It was easy enough to drill the AA-1 enclosure. The issue I had was that due to the extra thickness of the walls (as compared to an Altoids tin) and the difficulty getting the board close to the edge of the enclosure (there is extra aluminum in the corners to support the thumb screws that attach the lid so I had to trim the corners of the PCB for a better fit) I ended up having to drill the holes for the jacks bigger than I would have liked to.

In my case the jacks didn't end up protruding quite far enough through the enclosure to allow me to get a good connection with the power/phones/paddles so I had to make the jack holes a bit bigger to accomodate a bit of the body of the plug. I'm certainly no metal worker.The end result was ok but not perfect.

What I do like about this enclosure is being able to swivel the lid open (on the bottom) to change band modules by loosening one thumb screw.

Michael VE3WMB

--- In AT_Sprint@yahoogroups.com, "lownslow1601" <dpackard@...> wrote:
>
> It's time to put my ATS-3a into an enclosure. I would like to hear
> from anyone who has tried the Altoid-sized enclosure from American
> Morse. Among other things, I wonder if it is difficult to make holes
> for controls and control shafts, due to the heavier walls.
>
> 72/73, Dave K1YHR.
>

2969. Re: Enclosure for ATS-3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-20 19:11:20 UTC
From: David Packard
Topic: 2963 Message: 2969

Thank you, Michael. I understand the problem with the jacks. Now that you have it going, is the access to the four control buttons adequate? Also, are the thumb screws in the way when the lid is in place? Maybe I should stick with the Altoids tin. Thanks again and 72, Dave K1YHR.

2970. [Fwd: FS: ATS-3b from KD1JV]

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-20 21:01:19 UTC
From: Stephen Wandling
Topic: 2970 Message: 2970

I wish I had the bucks. Thought someone here might want to snap this up.

Stephen
VE7NSD

-------- Original Message --------
Subject: [QRP-L] FS: ATS-3b from KD1JV
Date: Sun, 20 Apr 2008 19:22:44 +0000 (GMT)
From: hamblen9@...
To: QRP-L@...

For Sale: ATS-3b 6-band QRP transceiver from KD1JV.

Kit bag never opened. Currently not available from KD1JV.

See http://kd1jv.qrpradio.com/ATS3B/ats3b.HTM for details.

Price what I paid: $190 plus $10 s/h

Guy, N7UN/2

Contact me at n7un@...

_____
QRP-L mailing list
Home: http://mailman.qth.net/mailman/listinfo/qrp-l
Help: http://mailman.qth.net/mmfaq.htm
Post: mailto:QRP-L@...

2971. Run for the Bacon, 4/20/2008, 6:00 pm

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-21 00:41:03 UTC
From: AT_Sprint@yahoogroups.com
Topic: 2971 Message: 2971

Reminder from: AT_Sprint Yahoo! Group
http://groups.yahoo.com/group/AT_Sprint/cal

Run for the Bacon
Sunday April 20, 2008
6:00 pm - 8:00 pm
(This event repeats every month on the third Sunday.)
Location: Your shack or anywhere

Notes:
This Sunday evening, the Flying Pigs Amateur Radio Club International will be holding its monthly Run For The Bacon. This is a friendly, two hour QRP CW Sprint, which is open to ALL radio amateurs, will last from 9:00 - 11:00PM EDT (0200-0400 UTC Monday).

You may work stations once per band on 160, 80, 40, 20, 15 or 10 Meters. Suggested starting frequencies are 1.812, 3.562, 7.044, 14.062, 21.062, and 28.062 MHz.

The exchange is RST, S/P/C (State, Province, Country) and Flying Pigs membership number. If you're not a member of the Flying Pigs, and would like to be; then please cli

All Rights Reserved
Copyright ? 2008
Yahoo! Inc.
http://www.yahoo.com

Privacy Policy:
http://privacy.yahoo.com/privacy/us

Terms of Service:
http://docs.yahoo.com/info/terms/

2972. Re: [Fwd: FS: ATS-3b from KD1JV]

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-21 01:13:48 UTC
From: Guy Hamblen
Topic: 2970 Message: 2972

Sold. Thanks. Guy, N7UN/2

--- In AT_Sprint@yahoogroups.com, Stephen Wandling <swandling@...>
wrote:
>
> I wish I had the bucks. Thought someone here might want to snap
this up.
>
> Stephen
> VE7NSD
>
> -------- Original Message --------
> Subject: [QRP-L] FS: ATS-3b from KD1JV
> Date: Sun, 20 Apr 2008 19:22:44 +0000 (GMT)
> From: hamblen9@...
> To: QRP-L@...
>
>
>
> For Sale: ATS-3b 6-band QRP transceiver from KD1JV.
>
> Kit bag never opened. Currently not available from KD1JV.
>
> See http://kd1jv.qrpradio.com/ATS3B/ats3b.HTM for details.
>
> Price what I paid: $190 plus $10 s/h
>
> Guy, N7UN/2
>
> Contact me at n7un@...
> ____
> QRP-L mailing list
> Home: http://mailman.qth.net/mailman/listinfo/qrp-l
> Help: http://mailman.qth.net/mmfaq.htm
> Post: mailto:QRP-L@...
>

2973. Re: Enclosure for ATS-3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-21 03:40:18 UTC
From: camqrp
Topic: 2963 Message: 2973

Dave -

I used the AA1 enclosure in lieu of an Altoids box for my ATS-3A and am very happy with it. In addition to being much more solid, it has room for all four band boards inside (during transit, that is!). Refer to the pictures in the Photo section under the title "N6GA's scope fotos". The scope fotos are long gone, but there are a couple shots showing how I dealt with the connector-end problem.

The board bumps up against the aluminum post in the corner which was left in to provide for a mounting hole for one of the thumb screws. The thumb screw doesn't travel very far into the box, so I took my Dremel thingie with a small grinding wheel and removed enough metal so that the board could be mounted flush against the end of the box. This way the outboard end of the connectors are almost flush with the outer edge of the box and the plugs make good contact when inserted.

Drilling this box is much easier than drilling an Altoids tin, and the finished result looks great. Especially if you use a stepped drill bit. When you finish drilling each hole to the proper size you can briefly touch it with the next sized step, leaving a clean-looking bevel on the edge of the hole.

Hope this helps.

Good Luck,

Cam Hartford N6GA

--- In AT_Sprint@yahoogroups.com, "lownslow1601" <dpackard@...> wrote:
>
> It's time to put my ATS-3a into an enclosure. I would like to hear
> from anyone who has tried the Altoid-sized enclosure from American
> Morse. Among other things, I wonder if it is difficult to make holes
> for controls and control shafts, due to the heavier walls.
>
> 72/73, Dave K1YHR.
>

2974. Re: Enclosure for ATS-3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-21 13:02:58 UTC
From: ve3wmb
Topic: 2963 Message: 2974

David :

No Issues with accessing the four control buttons, although somehow my holes ended up a little bit skewed (my fault) so I had to jiggle the board position a bit so that the buttons wouldn't bind.

The thumbscrews are on the bottom. As long as you use stick-on rubber feet that are thick enough there are no issues. I like the 3-M Bump-ONs, they come in various sizes.

I think that CAM's suggestion of grinding out the extra aluminum in the corners to make the board fit better is a very good one. Also as Cam suggested, it may actually be easier to drill the AA1 as material is much more rigid than the thin steel in an altoids tin.

I think that the AA1 makes for a slightly more rugged enclosure than an altoids tin.

Best of luck and be sure to post some pics when you are finished.

Cheers,

Michael VE3WMB

--- In AT_Sprint@yahoogroups.com, David Packard <dpackard@...> wrote:
>
> Thank you, Michael. I understand the problem with the jacks. Now that
> you have it going, is the access to the four control buttons adequate?
> Also, are the thumb screws in the way when the lid is in place?
Maybe I
> should stick with the Altoids tin. Thanks again and 72, Dave K1YHR.
>

2975. Re: Enclosure for ATS-3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-21 17:25:04 UTC
From: david_medders
Topic: 2963 Message: 2975

Cam,
Following up on your "during transit" comment regarding band boards,
why only during transit? Interaction between the active and stored
boards?

Thanks,
David
K5PL

--- In AT_Sprint@yahoogroups.com, "camqrp" <camqrp@...> wrote:
>
> Dave -
>
> I used the AA1 enclosure in lieu of an Altoids box for my ATS-3A and
> am very happy with it. In addition to being much more solid, it has
> room for all four band boards inside (during transit, that is!).

2976. Re:[AT_Sprint] Re: Enclosure fo r ATS-3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-21 22:03:25 UTC
From: J. Haynes
Topic: 2976 Message: 2976

...this reminds me. I have to glue my toroids. Especially that 80m board with Carey's mods. What kind of glue was determined to be most appropriate? Superglue did me wrong on 40; messed up the enamel.
Jonathan

2977. Re: Enclosure for ATS-3a

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-21 22:21:48 UTC
From: camqrp
Topic: 2963 Message: 2977

Dave -

The loose boards make for a pretty tight fit when the bottom's screwed on. I'd be afraid of a random short circuit, so I take them out. There might also be some interaction with and detuning of active circuits. In any case, I just feel safer with them out while I'm operating.

Cam

--- In AT_Sprint@yahoogroups.com, "david_medders" <david@...> wrote:
>
> Cam,
> Following up on your "during transit" comment regarding band boards,
> why only during transit? Interaction between the active and stored
> boards?
>
> Thanks,
> David
> K5PL
>
>

2978. FIRMWARE ISSUE

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-22 01:10:03 UTC
From: kc7fys
Topic: 2978 Message: 2978

This is a question for W1MT, but I'll ask it aloud on the forum FYI.
I built the cable, 6-220 ohm resistors on pins 2-7, pin 1 a bundle of 18-25 on the serial plug pins and the outer ground wire. Snapped photos through the process for posterity and reference.
PHOTOS HERE.
<http://www.flickr.com/photos/jonathancharles/sets/72157604664093736/>
I used 7 pin-sockets to fashion the plug, and just 'leaned' it into the 3b's board for contact. Started up IAR Workbench as per W1MT's link/instructions.
During the process the Bee buzzed, clicked, hissed, and beeped once or twice.
Everything was according to instructions until and through "Press CNTRL-D to start debug." After that, there was never a 'RUN' to press, nor was there specifically an 'EXIT DEBUG' dialog or clickable. So the process ended sort of inconclusively, with the IAR software just going back to the state it was in before the CNTRL-D compile process.
My Bee now works--sorta--which is even more puzzling, because I figured either the firmware would work, or I would get a dead bee. Instead I have a sort of Frankenbee. On powerup I get VM24 (pause) AT4TRT. That's got me scratching my head. (Perhaps I have contacted the other side.)
Initially, to verify the V1 firmware, Steve's original firmware--I did the DAH/MENU hold while powering on. I got a V1 followed by 8 annunciating the band module inserted at the time.
DFE works on 80, but there is no short beep indicating each number entered. UP/DOWN pressed at the same time gives me a 'dancing' LED' upper-left and lower-right flashing alternately with upper-right and lower-left. Battery voltage indication works. DFE annunciates the letter F instead of D.
I was running WIN98 on an old Thinkpad resurrected for the firmware flash.

So first I need to verify orientation of pins 1-7 on the 3B end of the plug. PIN1 is nearest the power jack. PIN7 under the letter R in PROGRAMMER stenciled on the board.

To what extent can I blow up my radio in this process. I fear I have. On the other hand, it's probably just a matter of tweaking my process, then I'm on track.
Jonathan

2979. RE: [AT_Sprint] FIRMWARE ISSUE

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-22 01:28:37 UTC
From: Ken Lotts
Topic: 2978 Message: 2979

Jonathon,
Hey I have the TI programmer thingy and I will be happy to send it to you as long as you send it back when your done.
I wont be needing it for a while.

Ken
aa7jc
-----Original Message-----
From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com]On Behalf Of kc7fys
Sent: Monday, April 21, 2008 6:10 PM
To: AT_Sprint@yahoogroups.com
Subject: [AT_Sprint] FIRMWARE ISSUE

This is a question for W1MT, but I'll ask it aloud on the forum FYI.
I built the cable, 6-220 ohm resistors on pins 2-7, pin 1 a bundle of 18-25 on the serial plug pins and the outer ground wire. Snapped photos through the process for posterity and reference.
PHOTOS HERE.
I used 7 pin-sockets to fashion the plug, and just 'leaned' it into the 3b's board for contact. Started up IAR Workbench as per W1MT's link/instructions.
During the process the Bee buzzed, clicked, hissed, and beeped once or twice.
Everything was according to instructions until and through "Press CNTRL-D to start debug." After that, there was never a 'RUN' to press, nor was there specifically an 'EXIT DEBUG' dialog or clickable. So the process ended sort of inconclusively, with the IAR software just going back to the state it was in before the CNTRL-D compile process.
My Bee now works--sorta--which is even more puzzling, because I figured either the firmware would work, or I would get a dead bee. Instead I have a sort of Frankenbee. On powerup I get VM24 (pause) AT4TRT. That's got me scratching my head. (Perhaps I have contacted the other side.)
Initially, to verify the V1 firmware, Steve's original firmware--I did the DAH/MENU hold while powering on. I got a V1 followed by 8 annunciating the band module inserted at the time.
DFE works on 80, but there is no short beep indicating each number entered. UP/DOWN pressed at the same time gives me a 'dancing' LED' upper-left and lower-right flashing alternately with upper-right and lower-left. Battery voltage indication works. DFE annunciates the letter F instead of D.
I was running WIN98 on an old Thinkpad resurrected for the firmware flash.

So first I need to verify orientation of pins 1-7 on the 3B end of the plug. PIN1 is nearest the power jack. PIN7 under the letter R in PROGRAMMER stenciled on the board.

To what extent can I blow up my radio in this process. I fear I have.
On the other hand, it's probably just a matter of tweaking my process,
then I'm on track.
Jonathan

2980. Re: [AT_Sprint] FIRMWARE ISSUE

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-22 02:05:21 UTC
From: Steven Pituch
Topic: 2978 Message: 2980

HI Jonathan,
Nice photos. It looks like you got the ground (pin 1) correct. Its the pin farthest from the band module and the inset in the photo shows it correctly.

Originally I got an error that the processor was incorrect. I looked at the chip (I have one of the 6 latest ones) and it says M430F1232, I put that in and then it worked perfectly. Apparently different CPUs were used at different times.

Steve, W2MY

2981. Re:Re: [AT_Sprint] FIRMWARE ISS UE

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-22 02:43:20 UTC
From: J. Haynes
Topic: 2981 Message: 2981

Oh! I got that too, but assumed it was a variation in naming conventions for the component. I'll check that.
Jonathan

2982. Re: [AT_Sprint] FIRMWARE ISSUE

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-22 12:20:40 UTC
From: Michael Harnage
Topic: 2978 Message: 2982

Photos look great.

--- kc7fys <kc7fys@...> wrote:
> Everything was according to instructions until and
> through "Press
> CNTRL-D to start debug." After that, there was never
> a 'RUN' to press,
> nor was there specifically an 'EXIT DEBUG' dialog or
> clickable.

The run and exit debug are buttons that appear when
you enter debug mode. Mouse over them to figure out
which are which.

> On powerup I get VM24
> (pause) AT4TRT.

Version Mike 2 Band module 4

Seems the menu button is down. It should only announce
version when the menu button is down during boot or
reset.

> I got a V1
> followed by 8
> annunciating the band module inserted at the time.
> DFE works on 80, but there is no short beep
> indicating each number
> entered.

I'll have to check on the beeps later tonight.

> UP/DOWN pressed at the same time gives me a
> 'dancing' LED'
> upper-left and lower-right flashing alternately with
> upper-right and
> lower-left.

Scan mode.

> DFE
> annunciates the letter
> F instead of D.

As designed.

> So first I need to verify orientation of pins 1-7 on
> the 3B end of the

> plug. PIN1 is nearest the power jack. PIN7 under the
> letter R in
> PROGRAMMER stenciled on the board.

Perfect.

>
> To what extent can I blow up my radio in this
> process.

Programming seems to be a binary event. Either works
or doesn't. As Steve P mentioned make sure you chose
the MPS430F1232 in the options menu (I think you did
or it would not have flashed the firmware.)

When you power up without touch any buttons do you
hear the version announcement?

-mike/w1mt

_____
Be a better friend, newshound, and
know-it-all with Yahoo! Mobile. Try it now.
http://mobile.yahoo.com/;_ylt=Ahu06i62sR8HDtDypao8Wcj9tAcJ

2983. Re:Re: [AT_Sprint] FIRMWARE ISS UE

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-22 13:02:29 UTC
From: J. Haynes
Topic: 2981 Message: 2983

Thanks for the thorough reply. Will check rig and report. Vy thx,
jonathan

2984. Re:Re: [AT_Sprint] FIRMWARE ISS UE

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-22 13:11:03 UTC
From: J. Haynes
Topic: 2981 Message: 2984

And...No version announce on power up w.o M pressed, so that part works. Could just be that I need to familiarize with a much more robust feature set.
I'll report later.
Jonathan

2985. FIRMWARE ISSUE

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-22 13:10:33 UTC
From: Steven Pituch
Topic: 2981 Message: 2985

> Thanks for the thorough reply. Will check rig and report. Vy thx,
> jonathan

Mike has been very good explaining his firmware to me. I really like the scanning option.

As a side note I made 7 contacts during the Run for the Bacon on Sunday night here, so my ATS3b is working great. I have debugged and potted the 80 meter and 40 meter modules. I need a lot more time to debug the other modules. I have made some significant changes and will report on them later. It seems I have quite a few few missing parts for the modules but I think I can substitute for them with what I have in stock.

I can't believe the performance of this rig. It puts most analog single band QRP rigs to shame.
Steve, W2MY

2986. Re:[AT_Sprint] FIRMWARE ISSUE

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-22 13:16:05 UTC
From: J. Haynes
Topic: 2986 Message: 2986

Steve, you know I'm gaga about the Bee, too. It reignited hamming for me.
What glue did you do your potting with-if that's what you meant?
J

2987. Re:Re: [AT_Sprint] FIRMWARE ISS UE

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-22 13:25:08 UTC
From: J. Haynes
Topic: 2981 Message: 2987

That's a great firmware designation that I missed in the documentation, by the way.

2988. FIRMWARE ISSUE

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-22 15:27:29 UTC
From: Steven Pituch
Topic: 2986 Message: 2988

Hi Jonathan and All,'
I d cided to use one drop of 5 minute epoxy at each toriod hole. I let it seep down to where it contacts the board. It attaches the toriod to the board and the windings to the toriod. I read that someone else said epoxy was OK so I just did it. If I need to readjust the windings later on I will have to take the toriod off of the board remove the glue and wire and rewind them. But I have done that before so I think this is the easy eay to secure the toriods.

I don't think hot glue works as well and I have had just as much trouble removing the hot glue from the toriods so I went with epoxy.

I also have several npo ceramic caps that overhang the module boards a bit so I dabbed some epoxy on those too. Very secure. Pictures later. The caps I ordered from Diz at Kits & Parts have really come in handy.

Regards,
Steve

----- Original Message -----
From: "J. Haynes" <eggs.4.iggs@...>
To: <AT_Sprint@yahoogroups.com>; <list2@...>
Sent: Tuesday, April 22, 2008 8:16 AM
Subject: Re:[AT_Sprint] FIRMWARE ISSUE

> Steve, you know I'm gaga about the Bee, too. It reignited hamming for me.
> What glue did you do your potting with-if that's what you meant?
> J
>

2989. Re: K5DEZ "The Next Generation"

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-23 06:22:53 UTC
From: Tim Keene
Topic: 2964 Message: 2989

Thanks for the compliment even though I did a lousy job cutting out
the freq window with a dull nibbler tool. But it is good enough for
who it's for. Hi Hi. BTW, My rig is not a "A" or "B'. It is a plain
ATS-3, with the wide band rx for SSB.
Tim - K5DEZ

--- In AT_Sprint@yahoogroups.com, "kc7fys" <kc7fys@...> wrote:
>
> Compliments on your ATS3b setup, man.
> First it was the Planters Cashews, now a sort of Star Trek-esque
> Spacelunch Box.
> 1
> <http://ph.groups.yahoo.com/group/AT_Sprint/photos/view/949b?
b=7&m=f&o=0\
> > 2
> <http://ph.groups.yahoo.com/group/AT_Sprint/photos/view/949b?
b=8&m=f&o=0\
> > 3
> <http://ph.groups.yahoo.com/group/AT_Sprint/photos/view/949b?
b=9&m=f&o=0\
> >
> Putting the QBSA and Bee in the same housing is definitely a smooth
> move.
> Jonathan
>

2990. QRP To The Field - this Saturday (April 26)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-23 22:49:35 UTC
From: scott mcmullen
Topic: 2990 Message: 2990

This Saturday (April 26) is the annual 'QRP To The Field' contest.

Should be a fun event to bring a QRP rig and antenna to and make
some contacts in the great outdoors.

The theme this year is to operate from the grounds of a museum,
though there are other station categories also if a museum is
not convenient.

The rules in full are at:

http://www.zianet.com/qrp/2008/qttfruls.html

73
Scott
W5ESE

QRP To The Field 2008 -- Days Of Yore

Date: Saturday, April 26, 2008

Time: 1500Z Apr. 26 to 0300Z Apr. 27

Bands: 40-20-15-10 meters, in the vicinity of the QRP calling
frequencies, please be courteous to others

Mode: CW only

Power out (QRP only): 5 watts or less

Categories: Single Op Museum station
Multi Op Museum station
Single Op Field Station
Multi Op Field Station
Home Station

Exchange: RST + SPC
Example: 559 NM

Scoring: QSO pts - 1 pt for each QSO per band
SPCs pts - count once per band

Bonus points: Use SPCs received to fill in the blanks with the state
abbreviation whose FIRST letter matches the individual
letters in the words "Olden Days" without duplicating
states. Remember to use the summary sheet, or you will
miss out on the extra points.

Each letter filled in is worth 100 pts (up to 900 max)
Example: A=AZ, D=DE, S=SD, L=LA, etc.

Note: Wyoming (WY)= Y; North Dakota (ND) and South
Dakota (SD) can also count as N or D, S or
D, but not both N and D, or S and D; E is a given,
be sure to count it in your bonus score

Location Multiplier: Museum station = x5
Field station = x3
Home Station = x1

Final Score: Total pts x Total SPCs x Location + Bonus Points = Final
Score

2991. SSB from the 3B receiver.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-24 05:30:44 UTC
From: kc7fys
Topic: 2991 Message: 2991

It's interesting to hear SSB
<http://www.flickr.com/photos/jonathancharles/2435696893/> so clearly
from the 3B, which usually don't talk much at all.
Jonathan

2992. ATS3A Is born..finally

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-26 23:22:39 UTC
From: kc0vkn
Topic: 2992 Message: 2992

After having the kit kicking around for many months, the 3B's got me off my rear to get it done.

I'll need a travel rig this summer, and, I wanted to do some operating from Dayton.

After finishing the rig and the 40M filter last weekend, I finished the 80, 20, 30M filters today.

Now, when the next batch of 3B's are announce, I can justify getting one :).

So far I enjoy the rig. I haven't made a QSO with it yet; I've done lots of listening.

So, see you on the bands!

KC0VKN, Joe

2993. ATS3b Power Out

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-27 17:43:45 UTC
From: Steven Pituch
Topic: 2993 Message: 2993

Hi all,
I have been spending the last couple of weeks trying to optimize the band modules. However, I may have created a mess and might have to start over from scratch.

For my test setup I was using my existing tuner and a switch that was also connected to the same power supply and another transceiver. I was transmitting into a dummy load but apparently was not getting correct current readings. I figured there was a problem when the negative power lead was disconnected and the ATS3b still operated. I think the ground on the coax was completing my power circuit. Anyway, I disconnected everything and started from scratch attaching the ATS3b antenna jack to the OHR WM-1 and that directly to the dummy load. Now I am getting believable current readings. However, they appear to be higher than desired.

To top it off I was using the WM-1 on peak power. (I added a cap and a switch to do this), and it was reading a little low. I now use the tune mode on the ATS3b and have the WM-1 on instantaneous and the power reading on the WM-1 is now slightly higher.

I think I am reading current draw correctly now. I get about

These are my readings so far for 12.00 V:

80 meters: 5.1 W, .88 Amps
40 meters 5.2 W, .93 Amps
30 meters 5.2 W, 1.01 Amps
17 meters 4.1 W, .99 Amps

Previously the current limiter was kicking off all the time so I did KX0R's mod by adding the 5.6K resistor in parallel to the 680 Ohm resister at R47, but it was still tripping at about .7 Amps as I recall. So I removed both resistors and installed a 470 Ohm resistor for R47. The 17 meter module was adjusted after I had access to the current readings. It still seems high.

The mods that I made to the modules so far are as follows:

80 meters:
C7F was added, 22 pf to center CT2
LF1 was 23 turns, now 21 turns
LF2 was 26 turns, now 28 turns

40 meters:
C2F was 680 pf, now 860 pf
LF1 was 15 turns, now 14 turns
LF2 was 17 turns, now 18 turns

30 meters:
C2F was 560 pf, now 607 pf
LF1 was 12 turns, now 11 turns

LF2 was 14 turns, now 15 turns

17 meters: (still experimenting - preliminary settings)
no changes yet.

I still have a funny feeling that I have a problem before the final amp, perhaps not enough drive from the previous stage?

I definitely don't have the knack. My current readings are much higher than KX0R's.

Steve, W2MY

2994. Re: ATS3b Power Out

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-29 00:27:34 UTC
From: radio_kx0r
Topic: 2993 Message: 2994

--- In AT_Sprint@yahoogroups.com, "Steven Pituch" <list2@...> wrote:

Steve,

Your power readings look great, but the current readings do seem high. Please forgive me for asking blunt questions, but I want to help here:

1) Can you verify your current measuring device? One idea is to insert an accurate resistor, like 0.10 ohms, 1%, in series with the original current meter and measure the voltage across the shunt. Use an accurate DVM. This is a second ammeter. You should have agreement if your first ammeter is accurate, and the resistor and DVM are accurate. Use whatever "standards" you have available to confirm the accuracy of each part of your measuring circuit. Many ammeters are off - on a DVM the amps range may have a large error. Sometimes the internal shunt resistor is damaged through "accidents", and we don't always notice.

2) Measure the current in the positive supply lead, with no other stuff hanging on, paralleled, or involved. As you realized, the ground return to your power supply should not go through the coax. The RF output should go only through the WM-1 and to the dummy load. These devices should not have grounds or returns, just coax leads, for these tests.

3) Measure your supply voltage near the ATS-3B power supply connector, before the internal schottky protection diode, to get agreement with my setup. All my measurements are taken key-down. The voltage measured with the key open is not very relevant; there will be a drop when the key is down. Use a regulated power supply with an adjustable control so that variations under load are minimal.

4) Have you checked your WM-1 for accuracy? The method in the manual is OK, but it has limited accuracy. Measuring RF watts accurately isn't easy, unless you have access to a calibrated lab power meter - and even with some of those you need power attentuators, which are a source of error. The easiest way I know to do a pretty good check on the WM-1 is to use a schottky diode detector to measure the RF peak voltage into an accurate 50 ohm load, and compare this with the WM-1. When I use the detector, I take the reading from the DVM, which is close to the RF peak voltage, and add 0.25 volts to that to correct for the drop in the schottky detector diode. This is an approximation, but it helps with the accuracy at 5W. The corrected peak voltage is used to get RMS volts - multiply by 0.707 - and then we compute power as Vrms squared divided by 50

ohms. The Norcal load has a chart, which agrees well with this. I would suggest avoiding any kind of peak power readings - what you want here is CW, and you want to watch for droop as the final mosfets heat up. For any measurements to be useful, it's essential that the load is really 50 ohms, and the voltmeter must be accurate. I used a Norcal dummy load with its on-board schottky detector to confirm and calibrate my WM-1. I checked these two against a third device, another schottky detector and load. All the loads should read 50 ohms on an accurate DVM (which you check against some 49.9 ohm precision resistors just to be sure). All the cables used in the measurements must be short and checked for flatness at the frequency you're running. I use an MFJ-259B for this, but there are other ways.

5) I found that my scope was not accurate enough for these measurements. If you have an accurately calibrated scope, you may do OK with that, measuring right at the input to your load.

6) It just happens that my FT-817ND measures very near 5.0W on all the HF bands, running on 12V. While this is not a calibrated source, it gives some confidence.

7) If you have access to a calibrated lab-grade wattmeter, use that as a check on everything else.

8) When all of your measurements agree within several percent at several different frequencies, you can have some confidence that you're getting control of your errors. All measurement devices have errors.

9) Even at the one-percent level, several instruments may add up the wrong way and push the total error to several percent. This is why we check with other instruments that are independent.

10) Of course, the only correct way to make accurate, reliable measurements is to use accurately calibrated devices that are all traceable back to lab standards. For most of us this isn't practical, so instead we use the best stuff we can get, and check it against other good stuff. Hopefully most of it stays pretty close, and we catch something that falls out of spec before it misleads us badly. We also try to correct known errors.

I think you MIGHT be seeing a sum of errors situation. If your WM-1 reads low, and your ammeter reads high, and your load is several percent off with a slightly weird cable, etc., you could see numbers like what you have.

In addition there could be several percent errors in my numbers in the other direction!

If the ATS-3B driver is weak, I think the output AND the current will fall. You can check the gates of the finals with a good scope and probe, and you should see a fairly rectangular wave. The wave is

best at the lower frequencies.

I'm wondering if you squeezed and spread your toroid coils to optimize your power and current while doing your measurements. You didn't mention it. Since you made small changes - just one or two turns - I'm wondering why you did that, since you can get the inductance to change more than just adding or subtracting a turn or two by the closeness or openness of the windings.

I do know that there are many good combinations possible from any one filter module. What I mean is that you could alter LF1, LF2, and C2F, and come up with several good results that give good power and efficiency. You might go nuts trying to find the ideal values.

Since Mike W1MT got similar results to mine, I think the radios and components aren't very different.

It would be nice if some others posted their results here, if they've had the patience to get into these adjustments seriously.

I don't know about yours, but my WM-1 doesn't track across its scale very well. I calibrated mine on the lower ranges as best I could, but I can see errors. I never could achieve good agreement from range to range and across the scales. It's still a very useful device, but not a lab standard. It does seem to hold adjustment well.

Good luck, and thanks for posting your results and questions. This is real ham radio, and it's a test of patience for sure.

72/73

KX0R

> Hi all,
> I have been spending the last couple of weeks trying to optimize the band modules. However, I may have created a mess and might have to start over from scratch.
>
> For my test setup I was using my existing tuner and a switch that was also connected to the same power supply and another transceiver. I was transmitting into a dummy load but apparently was not getting correct current readings. I figured there was a problem when the negative power lead was disconnected and the ATS3b still operated. I think the ground on the coax was completing my power circuit. Anyway, I disconnected everything and started from scratch attaching the ATS3b antenna jack to the OHR WM-1 and that directly to the dummy load. Now I am getting believable current readings. However, they appear to be higher than desired.
>
> To top it off I was using the WM-1 on peak power. (I added a cap and a switch to do this), and it was reading a little low. I now use

the tune mode on the ATS3b and have the WM-1 on instantaneous and the power reading on the WM-1 is now slightly higher.
>
> I think I am reading current draw correctly now. I get about
>
> These are my readings so far for 12.00 V:
>
> 80 meters: 5.1 W, .88 Amps
> 40 meters 5.2 W, .93 Amps
> 30 meters 5.2 W, 1.01 Amps
> 17 meters 4.1 W, .99 Amps
>
> Previously the current limiter was kicking off all the time so I did KX0R's mod by adding the 5.6K resistor in parallel to the 680 Ohm resister at R47, but it was still tripping at about .7 Amps as I recall. So I removed both resistors and installed a 470 Ohm resistor for R47. The 17 meter module was adjusted after I had access to the current readings. It still seems high.
>
> The mods that I made to the modules so far are as follows:
>
> 80 meters:
> C7F was added, 22 pf to center CT2
> LF1 was 23 turns, now 21 turns
> LF2 was 26 turns, now 28 turns
>
> 40 meters:
> C2F was 680 pf, now 860 pf
> LF1 was 15 turns, now 14 turns
> LF2 was 17 turns, now 18 turns
>
> 30 meters:
> C2F was 560 pf, now 607 pf
> LF1 was 12 turns, now 11 turns
> LF2 was 14 turns, now 15 turns
>
> 17 meters: (still experimenting - preliminary settings)
> no changes yet.
>
> I still have a funny feeling that I have a problem before the final amp, perhaps not enough drive from the previous stage?
>
> I definitely don't have the knack. My current readings are much higher than KX0R's.
>
> Steve, W2MY
>

2995. Re: ATS3b Power Out

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-29 13:42:18 UTC
From: Steven Pituch
Topic: 2993 Message: 2995

Hi Carey and All,
Thanks Carey for your thoughtful and detailed reply. It is exactly the kind of wisdom I was looking for.

I think I purchased my multimeter after speaking with Wayne Burdick after building my Sierra. I did purchase it to check RF power. That would put it at over 10-12 years old. It is a Radio Shack 22-168A. It always seemed to be a nice tool. I hardly ever check current with it, mostly just resistance and voltage. I don't have anything else to compare it to. I think its time to consider buying another one.

The dummy load in my MFJ 949 E is reading 56.7 Ohms. There's 13 percent right there! I can't back figure the math, but hoping this means that my Watt meter is reading low. I suppose you recommend the Norcal Dummy load. I was reading about the Accuprobe which is OP amp compensated, but the Norcal calibration chart seems adequate enough. I had had built two other more accurate dummy loads years ago but discarded them after a few moves because of the leaking mineral oil.

I would appreciate any advice on purchasing a decent multi meter. There are so many out there now. Should I stay away from auto ranging? It there one out there better than others under $100. Etc.

The way I adjusted the output filters:
I studied all the available documentation. I tried adjusting C3F as Mike had suggested and C4F as you had in a few cases but found that only changing C2F had a positive impact on the output power. I would first peak the module with the stock LF1 and LF2 number of turns by compressing or expanding the turn spacing. If I got to a fully compressed or expanded toroid, if I thought that adding or subtracting a turn would help I would try that. Otherwise I would add about 20 uF to C2F and try again. Often after doing this I would have to add or subtract turns to get to an optimal range. It seems that most of the time expanding turns on LF1 initiated a current trip, while expanding turns on LF2 would increase the power out incrementally. I did this for hours at a time until I got the apparent 5 W out. Of course some of the copper traces are gone at the toroids since I replaced them about a dozen times for each module.

As I said earlier I was tripping the current limiter at about 4 W I think. I got 5 W out on 40 m after doing your mod of R47, but it was on the hairy edge when I hooked it up to an antenna. That's when I replaced R47 with a 470 Ohm resistor. It wouldnake sense that maybe I am actuaally putting out 5.5 W or more and thus the high current.

I have the feeling that my power readings are one-half to one Watt too low.

73 and thanks again,
Steve, W2MY

2996. VM2 Firmware Features

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-30 11:01:19 UTC
From: kc7fys
Topic: 2996 Message: 2996

Well, the firmware upgrade to the W1MT Version "M2," despite all my fussing about reducing my 3B to "Frankenbee"--was a success. Just to make sure I didn't end up casting aspersions on Michael's firmware, here's what I experienced:

I was not fully prepared for some of the differences in feel. The differences are good, but take a tiny bit of getting used to.

--DIT annunciation on scan up/down every 1Khz
--Steve's speed up/down had a slowing/speeding up dit that went with adjustment which is not present in VM2
--Obviously the 'scan' function is great to listen to while cleaning up camp, etc.
--A variety of new patterns on the LED
--DFE uses no confirmation beep after each digit is input, but thankfully, is present in the 80M mode

I really like this firmware, and Michael is patient with newbies who want to tweak the code for their own needs.

I am not a digital mode user, but would like to think I could use the rig for that. I would need to zap Steve's firmware in for that purpose.

It's fun working with the firmware, says this newbie.
Jonathan

2997. Re: ATS3b Power Out

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-04-30 14:19:05 UTC
From: radio_kx0r
Topic: 2993 Message: 2997

--- In AT_Sprint@yahoogroups.com, "Steven Pituch" <list2@...> wrote:

Steve,

You've really done a lot of serious work on your rig! Sounds like
your method of optimizing is good, but you may have succeeded in
getting to much power out of the rig! I think an ampere going in,
after "matching", is too much.

Your dummy load error is significant. You may be able to correct it
close to 50 ohms with a parallel resistor. It would help a lot of
you could check it with an antenna analyzer at RF.

You RS meter may be fine. They key is to check it against
a "standard", such as a multimeter that has been recently calibrated
against real standards. If you can measure volts accurately, and you
can get 1% resistors, then you can check and measure current; you
also can find any error in your meter's current scale and correct it
somewhat.

The WM-1 may not read accurately when connected to a non-50-ohm load.
The cables will transform the non-50-ohm impedances into different
complex values also.

One warning is that once you get everything at 50 ohms, your ATS-3B
may deliver even more power than now, so the current may go too high
and the power out may be excessive. I hope not, but this might
happen. You may have to go through one more round of tweaking, since
the rig really needs to be set up for reasonable currents, good
efficiency, and a 5.0 watt maximum into 50 ohms.

I think you have more patience than I do.

At least we're pretty sure you're a victim of measurement errors
adding together.

This is partly why corporations with many pieces of test equipment
spend huge sums doing scheduled calibrations and getting
certificates, even when the equipment seems to be just fine.

Hang in there!

73,

KX0R

> Hi Carey and All,
> Thanks Carey for your thoughtful and detailed reply. It is exactly

the kind
> of wisdom I was looking for.
>
> I think I purchased my multimeter after speaking with Wayne Burdick
after
> building my Sierra. I did purchase it to check RF power. That
would put it
> at over 10-12 years old. It is a Radio Shack 22-168A. It always
seemed to
> be a nice tool. I hardly ever check current with it, mostly just
resistance
> and voltage. I don't have anything else to compare it to. I think
its time
> to consider buying another one.
>
> The dummy load in my MFJ 949 E is reading 56.7 Ohms. There's 13
percent
> right there! I can't back figure the math, but hoping this means
that my
> Watt meter is reading low. I suppose you recommend the Norcal
Dummy load.
> I was reading about the Accuprobe which is OP amp compensated, but
the
> Norcal calibration chart seems adequate enough. I had had built
two other
> more accurate dummy loads years ago but discarded them after a few
moves
> because of the leaking mineral oil.
>
> I would appreciate any advice on purchasing a decent multi meter.
There are
> so many out there now. Should I stay away from auto ranging? It
there one
> out there better than others under $100. Etc.
>
> The way I adjusted the output filters:
> I studied all the available documentation. I tried adjusting C3F
as Mike
> had suggested and C4F as you had in a few cases but found that only
changing
> C2F had a positive impact on the output power. I would first peak
the
> module with the stock LF1 and LF2 number of turns by compressing or
> expanding the turn spacing. If I got to a fully compressed or
expanded
> toroid, if I thought that adding or subtracting a turn would help I
would
> try that. Otherwise I would add about 20 uF to C2F and try again.
Often
> after doing this I would have to add or subtract turns to get to an

optimal
> range. It seems that most of the time expanding turns on LF1
initiated a
> current trip, while expanding turns on LF2 would increase the
power out
> incrementally. I did this for hours at a time until I got the
apparent 5 W
> out. Of course some of the copper traces are gone at the toroids
since I
> replaced them about a dozen times for each module.
>
> As I said earlier I was tripping the current limiter at about 4 W I
think.
> I got 5 W out on 40 m after doing your mod of R47, but it was on
the hairy
> edge when I hooked it up to an antenna. That's when I replaced R47
with a
> 470 Ohm resistor. It wouldnake sense that maybe I am actuaally
putting out
> 5.5 W or more and thus the high current.
>
> I have the feeling that my power readings are one-half to one Watt
too low.
>
> 73 and thanks again,
> Steve, W2MY
>

2998. Another ATS3b is born

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-02 14:56:08 UTC
From: Bill
Topic: 2998 Message: 2998

I got my B working this week. It's not finished yet, but its good enough to put on the air. I only have the 40 and 20 meter band modules finished. I am really enjoying using the radio and find the receive is much better than I expected. I had the pleasure of building a KX1 recently and the rx is just as good on my B. I am very pleased.

I want to redo my altoids tin again. What is the secret to getting the board close enough to the edge, so the jacks protrude? I have been using a demel bit number 125 and it makes short work of cutting a tin. I ruined the first tin, I used the hole size in the manual for the 4 screw holes which was 3/16ths. 3/16ths is larger than the screw heads.

This was my fist time using the Cash Olsen method of soldering. When I first started the build, I didn't think my eyes would let me do it. It was rough, but I did it. The hot air method of soldering worked so well, my board looks like it was flowed by Kenwood. Made me wonder how many ATS kits get bought but never built.

I do have one minor problem. My kit was the last one Steve mailed before he left. The 7th from the 3rd batch. Anyway, I am missing 2 - 2.2pF ceramic disc capacitors. Is there a kind soul on the list that could mail me a couple to my QRZ address, please. I'll gladly pay by return mail.

73, Bill NT9K
http://www.nt9k.com

2999. Re: [AT_Sprint] Another ATS3b is born

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-02 15:15:43 UTC
From: n0tu/Steve
Topic: 2998 Message: 2999

On Fri, May 2, 2008 at 3:56 PM, Bill <Bill@...> wrote:
> I got my B working this week. It's not finished yet, but its good
> enough to put on the air. I only have the 40 and 20 meter band modules
> finished. I am really enjoying using the radio and find the receive is
> much better than I expected. I had the pleasure of building a KX1
> recently and the rx is just as good on my B. I am very pleased.
>
> I want to redo my altoids tin again. What is the secret to getting the
> board close enough to the edge, so the jacks protrude? I have been
> using a demel bit number 125 and it makes short work of cutting a tin.
> I ruined the first tin, I used the hole size in the manual for the 4
> screw holes which was 3/16ths. 3/16ths is larger than the screw heads.
>
> This was my fist time using the Cash Olsen method of soldering. When I
> first started the build, I didn't think my eyes would let me do it. It
> was rough, but I did it. The hot air method of soldering worked so
> well, my board looks like it was flowed by Kenwood. Made me wonder how
> many ATS kits get bought but never built.
>
> I do have one minor problem. My kit was the last one Steve mailed
> before he left. The 7th from the 3rd batch. Anyway, I am missing 2 -
> 2.2pF ceramic disc capacitors. Is there a kind soul on the list that
> could mail me a couple to my QRZ address, please. I'll gladly pay by
> return mail.
>
> 73, Bill NT9K
> http://www.nt9k.com
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>
>

3000. Re: [AT_Sprint] Another ATS3b is born

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-02 15:17:40 UTC
From: n0tu/Steve
Topic: 2998 Message: 3000

Push send before my brain was engaged? DOH!

Let me go look for the caps.
But I wanted to say WOW what cool key collection you have!!!
Will advise on the caps ASAP. Steve/n0tu

On Fri, May 2, 2008 at 3:56 PM, Bill <Bill@...> wrote:
> I got my B working this week. It's not finished yet, but its good
> enough to put on the air. I only have the 40 and 20 meter band modules
> finished. I am really enjoying using the radio and find the receive is
> much better than I expected. I had the pleasure of building a KX1
> recently and the rx is just as good on my B. I am very pleased.
>
> I want to redo my altoids tin again. What is the secret to getting the
> board close enough to the edge, so the jacks protrude? I have been
> using a demel bit number 125 and it makes short work of cutting a tin.
> I ruined the first tin, I used the hole size in the manual for the 4
> screw holes which was 3/16ths. 3/16ths is larger than the screw heads.
>
> This was my fist time using the Cash Olsen method of soldering. When I
> first started the build, I didn't think my eyes would let me do it. It
> was rough, but I did it. The hot air method of soldering worked so
> well, my board looks like it was flowed by Kenwood. Made me wonder how
> many ATS kits get bought but never built.
>
> I do have one minor problem. My kit was the last one Steve mailed
> before he left. The 7th from the 3rd batch. Anyway, I am missing 2 -
> 2.2pF ceramic disc capacitors. Is there a kind soul on the list that
> could mail me a couple to my QRZ address, please. I'll gladly pay by
> return mail.
>
> 73, Bill NT9K
> http://www.nt9k.com
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>
>

3001. Re: [AT_Sprint] Another ATS3b is born

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-02 15:32:05 UTC
From: hermit
Topic: 2998 Message: 3001

Just wanted to add that the proud recpient of that KX-1 is me. You see Bill is my Elmer who is a highly skilled builder so when I bought the KX-1 kit he was happy to build it for me.

Bill, we need to try for a qso on these two builds.

73

Dick KB3OMJ

>I got my B working this week. It's not finished yet, but its good
>enough to put on the air. I only have the 40 and 20 meter band modules
>finished. I am really enjoying using the radio and find the receive is
>much better than I expected. I had the pleasure of building a KX1
>recently and the rx is just as good on my B. I am very pleased.
>
>I want to redo my altoids tin again. What is the secret to getting the
>board close enough to the edge, so the jacks protrude? I have been
>using a demel bit number 125 and it makes short work of cutting a tin.
>I ruined the first tin, I used the hole size in the manual for the 4
>screw holes which was 3/16ths. 3/16ths is larger than the screw heads.
>
>This was my fist time using the Cash Olsen method of soldering. When I
>first started the build, I didn't think my eyes would let me do it. It
>was rough, but I did it. The hot air method of soldering worked so
>well, my board looks like it was flowed by Kenwood. Made me wonder how
>many ATS kits get bought but never built.
>
>I do have one minor problem. My kit was the last one Steve mailed
>before he left. The 7th from the 3rd batch. Anyway, I am missing 2 -
>2.2pF ceramic disc capacitors. Is there a kind soul on the list that
>could mail me a couple to my QRZ address, please. I'll gladly pay by
>return mail.
>
>73, Bill NT9K
>http://www.nt9k.com

3002. Re: Another ATS3b is born

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-02 16:55:01 UTC
From: Steven Pituch
Topic: 2998 Message: 3002

Hi Bill,
Also check to see if you have the two 15 pF caps as I had them also missing.
Also I had two extra T37-2s and two fewer T30-2s. The T37-2s will work in a
pinch but are a little big.

Steve, W2MY

3003. Re: Another ATS3b is born

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-02 17:41:18 UTC
From: Bill
Topic: 2998 Message: 3003

Thanks Steve, I was missing 3 - 2.2pF and 1 - 47pF ceramic disc capacitors. I got a few extra parts too. I was able to scrounge one 2.2pF from an old vcr, but still need 2 more. I found the 47pF locally, but no joy with the 2.2's. So, I really just need 2 - 2.2pF's.

Thanks for the comment on my keys. I never intended on collecting keys, but now find myself with a serious problem. I see a key that I like and I'm like a junkie on crack. I got to have it, if I can't buy it, I make it. I uploaded a more recent key lineup photo at the bottom of the page for you.

Any comments on the secret to getting the PCB close enough to the edge that the jacks protrude from the altoids tin? I thought about taking the jacks off the board and then marking the 4 screw holes from inside with the board as far over as it will go?

Before I close this, thank you Rich KB3OMJ for the kind words about my building skills. The truth is, lots of the guys on this list are WAY out of my league. My eyes are not what they once were and I don't have my test equipment any more. But thank you for the kind words.
73, Bill NT9K
http://www.nt9k.com

--- In AT_Sprint@yahoogroups.com, "Steven Pituch" <list2@...> wrote:
>
> Hi Bill,
> Also check to see if you have the two 15 pF caps as I had them also missing.
> Also I had two extra T37-2s and two fewer T30-2s. The T37-2s will work in a
> pinch but are a little big.
>
> Steve, W2MY
>

3004. Re: Another ATS3b is born

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-02 18:38:18 UTC
From: Steven Pituch
Topic: 2998 Message: 3004

HI Bill,
The two mounting screw holes closest the three jacks need to be "almost" against the case. The board needs to be filed down "almost" to the two metal standoffs. With this, the three jacks "almost" protrude.

I hope this "almost" helps you. ;)

Steve, W2MY
----- Original Message -----

> Any comments on the secret to getting the PCB close enough to the edge
> that the jacks protrude from the altoids tin?

3005. PA for the ATS?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-02 20:23:30 UTC
From: Roland Whitsitt
Topic: 3005 Message: 3005

Anybody know how I can aquire one of those amp kits shown in the file section? I think it was made by JN1GLB. And what's the cost?
Roland N5VWN in Californy

3006. Re: [AT_Sprint] Re: Another ATS3b is born

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-02 20:40:17 UTC
From: n0tu/Steve
Topic: 2998 Message: 3006

No Luck Bill on the 2.2s ...I found the 2.2pFenvelope in my cap drawer
but she was empty! Sorry couldn't help?

On Fri, May 2, 2008 at 6:41 PM, Bill <Bill@...> wrote:
> Thanks Steve, I was missing 3 - 2.2pF and 1 - 47pF ceramic disc
> capacitors. I got a few extra parts too. I was able to scrounge one
> 2.2pF from an old vcr, but still need 2 more. I found the 47pF
> locally, but no joy with the 2.2's. So, I really just need 2 - 2.2pF's.
>
> Thanks for the comment on my keys. I never intended on collecting
> keys, but now find myself with a serious problem. I see a key that I
> like and I'm like a junkie on crack. I got to have it, if I can't buy
> it, I make it. I uploaded a more recent key lineup photo at the bottom
> of the page for you.
>
> Any comments on the secret to getting the PCB close enough to the edge
> that the jacks protrude from the altoids tin? I thought about taking
> the jacks off the board and then marking the 4 screw holes from inside
> with the board as far over as it will go?
>
> Before I close this, thank you Rich KB3OMJ for the kind words about my
> building skills. The truth is, lots of the guys on this list are WAY
> out of my league. My eyes are not what they once were and I don't have
> my test equipment any more. But thank you for the kind words.
>
> 73, Bill NT9K
> http://www.nt9k.com
>
>
>
> --- In AT_Sprint@yahoogroups.com, "Steven Pituch" <list2@...> wrote:
> >
> > Hi Bill,
> > Also check to see if you have the two 15 pF caps as I had them also
> missing.
> > Also I had two extra T37-2s and two fewer T30-2s. The T37-2s will
> work in a
> > pinch but are a little big.
> >
> > Steve, W2MY
> >
>
>
>
> ------------------------------------

>
> Yahoo! Groups Links
>
>
>
>

3007. Re:[AT_Sprint] PA for the ATS?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-02 22:00:33 UTC
From: J. Haynes
Topic: 3007 Message: 3007

The so-called 'Altoids PA' is explained in the READ_ME found in the same folder. It hasn't been kitted, but the plans and BOM are available for the adventurous.
Also, search for it on Flickr.com.
Jonathan KC7FYS

3008. Re: [AT_Sprint] PA for the ATS?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-02 22:30:32 UTC
From: Kurt Savegnago
Topic: 3005 Message: 3008

Someone I bet will kit it here. Looks to doggone
good.

Kurt KC9LDH
--- Roland Whitsitt <n5vwn@...> wrote:

> Anybody know how I can aquire one of those amp kits
> shown in the file section? I think it
> was made by JN1GLB. And what's the cost?
> Roland N5VWN in Californy
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>
>
>

3009. Re: [AT_Sprint] Re: Another ATS3b is born

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-03 00:26:18 UTC
From: Stephen Wandling
Topic: 2998 Message: 3009

Bill,

I just noticed your request and have before me an envelope with
10 2.2pF NPO caps that look identical to the ones in my kit. I
would be happy to send 2 of them to you. If your QRZ address I will
send them out to that. I sure appreciated it when Bill Noyce sent
some caps that were missing from my kit. Thanks for the
opportunity to return the favour.

72,
Stephen
VE7NSD

Bill wrote:
>
> Thanks Steve, I was missing 3 - 2.2pF and 1 - 47pF ceramic disc
> capacitors. I got a few extra parts too. I was able to scrounge one
> 2.2pF from an old vcr, but still need 2 more. I found the 47pF
> locally, but no joy with the 2.2's. So, I really just need 2 - 2.2pF's.
>
> Thanks for the comment on my keys. I never intended on collecting
> keys, but now find myself with a serious problem. I see a key that I
> like and I'm like a junkie on crack. I got to have it, if I can't buy
> it, I make it. I uploaded a more recent key lineup photo at the bottom
> of the page for you.
>
> Any comments on the secret to getting the PCB close enough to the edge
> that the jacks protrude from the altoids tin? I thought about taking
> the jacks off the board and then marking the 4 screw holes from inside
> with the board as far over as it will go?
>
> Before I close this, thank you Rich KB3OMJ for the kind words about my
> building skills. The truth is, lots of the guys on this list are WAY
> out of my league. My eyes are not what they once were and I don't have
> my test equipment any more. But thank you for the kind words.
> 73, Bill NT9K
> http://www.nt9k.com <http://www.nt9k.com>
>
> --- In AT_Sprint@yahoogroups.com <mailto:AT_Sprint%40yahoogroups.com>,
> "Steven Pituch" <list2@...> wrote:
> >
> > Hi Bill,
> > Also check to see if you have the two 15 pF caps as I had them also
> missing.
> > Also I had two extra T37-2s and two fewer T30-2s. The T37-2s will
> work in a

> > pinch but are a little big.
> >
> > Steve, W2MY
> >
>
>

3010. Re: Another ATS3b is born

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-03 00:58:33 UTC
From: Bill
Topic: 2998 Message: 3010

Thanks Stephen, and thanks to n0tu/Steve for trying to help me. Yes, my QRZ info is good. I really appreciate you helping me! Bill NT9K..

--- In AT_Sprint@yahoogroups.com, Stephen Wandling <swandling@...> wrote:
>
> Bill,
>
> I just noticed your request and have before me an envelope with
> 10 2.2pF NPO caps that look identical to the ones in my kit. I
> would be happy to send 2 of them to you. If your QRZ address I will
> send them out to that. I sure appreciated it when Bill Noyce sent
> some caps that were missing from my kit. Thanks for the
> opportunity to return the favour.
>
> 72,
> Stephen
> VE7NSD
>
> Bill wrote:
> >
> > Thanks Steve, I was missing 3 - 2.2pF and 1 - 47pF ceramic disc
> > capacitors. I got a few extra parts too. I was able to scrounge one
> > 2.2pF from an old vcr, but still need 2 more. I found the 47pF
> > locally, but no joy with the 2.2's. So, I really just need 2 -
2.2pF's.

3011. Re: [AT_Sprint] Re: Another ATS3b is born

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-03 01:19:01 UTC
From: Stephen Wandling
Topic: 2998 Message: 3011

Not a problem. I will soon have them winging their way to your
location.

Bill wrote:
>
> Thanks Stephen, and thanks to n0tu/Steve for trying to help me. Yes,
> my QRZ info is good. I really appreciate you helping me! Bill NT9K..
>
> --- In AT_Sprint@yahoogroups.com <mailto:AT_Sprint%40yahoogroups.com>,
> Stephen Wandling <swandling@...> wrote:
> >
> > Bill,
> >
> > I just noticed your request and have before me an envelope with
> > 10 2.2pF NPO caps that look identical to the ones in my kit. I
> > would be happy to send 2 of them to you. If your QRZ address I will
> > send them out to that. I sure appreciated it when Bill Noyce sent
> > some caps that were missing from my kit. Thanks for the
> > opportunity to return the favour.
> >
> > 72,
> > Stephen
> > VE7NSD
> >
> > Bill wrote:
> > >
> > > Thanks Steve, I was missing 3 - 2.2pF and 1 - 47pF ceramic disc
> > > capacitors. I got a few extra parts too. I was able to scrounge one
> > > 2.2pF from an old vcr, but still need 2 more. I found the 47pF
> > > locally, but no joy with the 2.2's. So, I really just need 2 -
> 2.2pF's.
>
>

3012. Re:[AT_Sprint] PA for the ATS?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-03 09:21:08 UTC
From: J. Haynes
Topic: 3007 Message: 3012

N5VWN, I an unable to email you. Maybe SBC is blocking foreign ISP's?
Could you shoot of a note? Re: Altoids PA.
7J1AWL Jonathan

3013. RE: [AT_Sprint] PA for the ATS?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-03 12:05:29 UTC
From: Dale Putnam
Topic: 3007 Message: 3013

Hi Jonathan,
Could you please send the info to me too?
Thank you,--... ...--Dale - WC7S in Wy

To: AT_Sprint@yahoogroups.comFrom: eggs.4.iggs@softbank.ne.jpDate: Sat, 3 May 2008 18:21:08 +0900Subject: Re:[AT_Sprint] PA for the ATS?

N5VWN, I an unable to email you. Maybe SBC is blocking foreign ISP's?Could you shoot of a note? Re: Altoids PA.7J1AWL Jonathan

_____
Stay in touch when you're away with Windows Live Messenger.
http://www.windowslive.com/messenger/overview.html?ocid=TXT_TAGLM_WL_Refresh_messenger_052008

3014. Re:[AT_Sprint] PA for the ATS?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-03 13:41:45 UTC
From: wa0itp@mchsi.com
Topic: 3005 Message: 3014

W5USJ has a very fine little amp which will be kitted soon by QRPme.
http://w5usj.com/TxTopperQRPAmp.html

WA0ITP

---------- Original message ----------
From: J. Haynes <eggs.4.iggs@...>
>
> The so-called 'Altoids PA' is explained in the READ_ME found in the same folder.
> It hasn't been kitted, but the plans and BOM are available for the adventurous.
> Also, search for it on Flickr.com.
> Jonathan KC7FYS

3015. PFR-3 BS170 RF Mosfets

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-03 23:55:17 UTC
From: radio_kx0r
Topic: 3015 Message: 3015

All,

I've been looking over Steve Weber's circuit for the new PFR-3 transceiver on Doug Hendricks' website:

http://www.qrpkits.com/pfr3.html

See the preliminary manual - download the pdf.

Much of the rig is very similar to the ATS-3A and B, with the BLT and 4-digit display added. It looks like a real nice combination in one box. Various pros and cons - very tempting!

One interesting point is that the three 2N7000 RF final mosfets used in the ATS rigs have been replaced by BS170 mosfets. Both of these devices are TO-92, and the specs in the data sheets are very similar. It looks to me like the BS170 can handle more current, and it has a better thermal resistance spec than the 2N7000.

The BS170 may have larger capacitances than the 2N7000 - a possible drawback.

Some of the differences may be related to how the specs are measured - I can't be sure if the comparison is "apples to oranges".

How long until one of us pulls the 2N7000's out of our ATS-3A or B, replaces them with three BS170's, and reports whether they work better or worse?

No doubt Steve Weber and Doug Hendicks changed the output mosfets for good reasons. I doubt that it was cost, since the BS170's are a few pennies more - and both mosfets are dirt cheap. My hunch is that the BS170's are less fragile, but so far I have only a hunch based on some slight differences between two similar data sheets.

Has anyone in our group worked with the BS170? If this is an upgrade path for the ATS rigs, we need to look at this seriously!

Since I've got both my rigs all tuned up for the 2N7000's at 12V and 5W, and they run real nicely, I can't get wildly excited about messing with those filter modules again !!! (If it ain't broke don't fix it, etc.)

The other mysterious question is why did Steve upgrade the driver IC from the 74HC02 used in the ATS-3A to the 74AC02 used in the ATS-3B - that was done to get better drive and efficiency on the higher frequency bands on the "B" - and now the PFR-3 goes back to the 74HC02 - makes some sense since the PFR-3 doesn't cover 18 and 21

Mhz. This suggests that the BS170's are easy to drive.

Has anyone here tried replacing the 74HC02 in the ATS-3A with a 74AC02? It might make 20M a little hotter on the "A" rig. I'm tempted, but wonder if one of you has gone first?

How about those BS170's ??

It wouldn't be hard to replace the 2N7000's - amazing that I haven't blown one of them yet!

72/73

Carey
KX0R

3016. Power Measurement

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-04 00:09:23 UTC
From: Steven Pituch
Topic: 3005 Message: 3016

Hi All,
To properly adjust my output filters on my ATS3b band modules, I've made a pretty accurate dummy load.

I am planning on using the diode detector shown in Figure 7, on page 146, of "Solid State Design" to measure RF Voltage at the antenna jack. Seems to be a fairly accurate way to measure output power at 5 Watts. Any comments?

Note the output power is computed by V*V/(2*R).

Steve, W2MY

3017. 2N7000 Mounting

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-04 03:32:28 UTC
From: Stephen Wandling
Topic: 3017 Message: 3017

I guess I was trying to SPRINT across the finish line. Too often I forget that its the voyage and not the destination that is important. Or maybe subconsciously I thought it wasn't right for those three FETs to be bowing down like that. Anyway, mine don't.

From looking at photos on the site I gather that using the PC board as a heatsink was something that came with the B? Regardless, how much trouble am I in? I have them jammed down pretty close to the board, but if I de-solder the middle connections I might be able to bend them down enough, MAYBE. Then I would need jumpers to connect the middle pins to the board. But, I suspect that the two outer leads are too short to allow the case to be tight to the board.

Or, I could cut a piece of 1/8" aluminum and glue it to the board and snug to the FETs, but that might also inadvertently glue the FETs onto the board. Or, bend some pop can aluminum to snap onto the 3 FETs and also rest on the board, but that might come loose.

Or do nothing, and hope for the best.

Am I the first to create this situation? Any ideas as to how to proceed, and end up with a reliable rig?

Thanks,

72,
Stephen
VE7NSD

3018. Re: [AT_Sprint] 2N7000 Mounting

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-04 12:01:58 UTC
From: Michael Harnage
Topic: 3017 Message: 3018

If you aren't going to do much with the digital modes
I would leave it.

If you are going to do much with the digital modes I
would still leave them until they blow then replace
them.

Either way I think it's better to do a clean replace
rather than try to bend what's there already since the
leads are so short.

Who knows you may never need to replace them.

-mike/w1mt

--- Stephen Wandling <swandling@...> wrote:

> Or maybe subconsciously I thought it wasn't right
> for those three FETs
> to be bowing down like that. Anyway, mine don't.
>
> Am I the first to create this situation? Any ideas
> as to how to
> proceed, and end up with a reliable rig?

_____
Be a better friend, newshound, and
know-it-all with Yahoo! Mobile. Try it now.
http://mobile.yahoo.com/;_ylt=Ahu06i62sR8HDtDypao8Wcj9tAcJ

3019. Re: 2N7000 Mounting

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-04 12:26:13 UTC
From: Steven Pituch
Topic: 3017 Message: 3019

Hi Stephen,
I have wondered about this also. I got my 7000s pretty close to the board but are probably not touching. It would seem best if they were cemented down to the board with some type of thermally conducting adhesive. Otherwise, the only way the heat would get to the ground plane would be via thermal radiation, not conduction. In which case the 7000s might be better off mounted straight up to have better air circulation. But they would probably interfere with the band module. However, I am very rusty on my thermodynamics.

If I were you, I would probably leave yours alone. I plan on stocking up on some 2N7000s as they seem to be pretty cheap.

Steve, W2MY

3020. 2N7000 various parameters

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-04 13:24:02 UTC
From: Dale Putnam
Topic: 3017 Message: 3020

Hi Steve and all the exceptional knowing folks,
I had the occasion to find a new set of 2N7000, so while cruising the catalog, found a page of various specs for the 2N7000, the question, other than the price, the main difference appeared to be the robustness of the different models, does this difference allow for more tolerance to high swr, or more effeceincy or both or none, in our beloved AT?
Thanks,--... ...--Dale - WC7S in Wy

_____
Get Free (PRODUCT) RED™ Emoticons, Winks and Display Pics.
http://joinred.spaces.live.com?ocid=TXT_HMTG_prodredemoticons_052008

3021. Re: [AT_Sprint] 2N7000 Mounting

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-04 15:04:49 UTC
From: Mark Brueggemann
Topic: 3017 Message: 3021

--- Stephen Wandling <swandling@...> wrote:

> From looking at photos on the site I gather that using the PC board
> as a heatsink was something that came with the B?

I wouldn't consider thermal conduction through the case to be
a significant path of cooling for these parts. Even if you
were to mount them flat to the board with thermal goop it still
won't change the thermal resistance from the die through the
package, which is pretty high. The primary path of heat from
the die to ambient is through the device's leads. In that
case having the shortest leads possible to the PCB, and using
a suitable surface area of copper on the PCB from there is
the most effective passive cooling you'll get. If you run
a duty cycle that will push the FET's past the limit regulary
as in the aforementioned PSK service, then you might revisit
a more thermally conductive solution than the PCB. I don't
think Steve ever anticipated this rig to be anything more
than a CW rig with CW duty cycles.

Mark K5LXP
Albuquerque, NM

3022. Re: [AT_Sprint] 2N7000 Mounting

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-04 17:02:38 UTC
From: Stephen Wandling
Topic: 3017 Message: 3022

Thanks for all of the responses from everyone. I'm going to leave
them as they are for now and replace them if they fail.

[I was visiting Diz and Dan's sites last night and will be putting in
an order of some of their packages, and one has a bunch of 2N7000s.
Just getting back into this hobby after 50 years, so I don't have a
junk box yet. But, I do have a box of consumer electronics to strip
parts from and plan to use the heat gun for that.]

I will check today, but the only unresolved issue is whether there is
a conflict with the filter board. I don't think there is.

I like the idea that the rig handles digital modes, but my immediate
usage will be CW. Plus, I don't plan to be QRO like some of you
(5 watts!! :-)) and will be content to run a cool 4 watts or so.

My goal is to have the Bee on the air today!

72,
Stephen
VE7NSD

Mark Brueggemann wrote:
>
>
> --- Stephen Wandling <swandling@...
> <mailto:swandling%40gmail.com>> wrote:
>
> > From looking at photos on the site I gather that using the PC board
> > as a heatsink was something that came with the B?
>
> I wouldn't consider thermal conduction through the case to be
> a significant path of cooling for these parts. Even if you
> were to mount them flat to the board with thermal goop it still
> won't change the thermal resistance from the die through the
> package, which is pretty high. The primary path of heat from
> the die to ambient is through the device's leads. In that
> case having the shortest leads possible to the PCB, and using
> a suitable surface area of copper on the PCB from there is
> the most effective passive cooling you'll get. If you run
> a duty cycle that will push the FET's past the limit regulary
> as in the aforementioned PSK service, then you might revisit
> a more thermally conductive solution than the PCB. I don't
> think Steve ever anticipated this rig to be anything more
> than a CW rig with CW duty cycles.
>

> Mark K5LXP
> Albuquerque, NM
>
>

3023. Re: 2N7000 Mounting

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-05 00:47:10 UTC
From: radio_kx0r
Topic: 3017 Message: 3023

--- In AT_Sprint@yahoogroups.com, Stephen Wandling <swandling@...>
wrote:

Stephen,

The ATS-3A and B manuals are very clear on how to mount the three
2N7000 RF power mosfets, but there is no explanation other than that
the board acts as a heatsink.

I mounted mine as flat as I could get them, and I got them to touch
the board by pre-bending the leads prior to soldering. However, I
agree that the leads provide a path for most of the heat to get out.

In the new PFR-3 Steve Weber sorta-clone-of-ATS-rig on Doug Henricks'
site, the three BS170 final mosfets are mounted straight up! Another
part of the BS170 vs 2N7000 mystery.

How come none of you guys said anything about the BS170's mentioned
in my previous post - I'm puzzled that no one responded to this so
far - too bad Steve Weber's not around. I plan to ask him about this
change, just in case the BS170's are really an upgrade with a little
more safety factor.

If you do blow out a final, it may be the zener diode that goes
first. It might short and protect the mosfets. My scope
measurements suggested that on the higher frequency bands, the peak
drain voltage is pretty high - the diode may actually be clipping a
little if the load's not quite heavy enough.

Since no one's complaining here, it must not be much of a problem.

Stephen, if your rig runs well with the mosfets stright up, please
come back here and let us know after you've put some serious hours on
them.

I know this - that after a half-hour ragchew on 20M, at 5W out, my
altoids box case is noticeably warmer than before the QSO...

When Steve W and I discussed the DDS losing-lock problem last year,
we were heating our rigs up with heat guns until things were toasty.
That was at 5W, 12V, and key down for a while...the mosfets never
blew. The driver never blew.

This is one amazing rig!

Someone's going to get 10W out of one before long. Try 6 BS170' and
a larger driver? How about a single IRF510?

72/73

KX0R
Carey

>
> I guess I was trying to SPRINT across the finish line. Too often I
> forget that its the voyage and not the destination that is
important.
> Or maybe subconsciously I thought it wasn't right for those three
FETs
> to be bowing down like that. Anyway, mine don't.
>
> From looking at photos on the site I gather that using the PC
board as
> a heatsink was something that came with the B? Regardless, how
much
> trouble am I in? I have them jammed down pretty close to the
board, but
> if I de-solder the middle connections I might be able to bend them
down
> enough, MAYBE. Then I would need jumpers to connect the middle
pins to
> the board. But, I suspect that the two outer leads are too short
to
> allow the case to be tight to the board.
>
> Or, I could cut a piece of 1/8" aluminum and glue it to the board
and
> snug to the FETs, but that might also inadvertently glue the FETs
onto
> the board. Or, bend some pop can aluminum to snap onto the 3 FETs
and
> also rest on the board, but that might come loose.
>
> Or do nothing, and hope for the best.
>
> Am I the first to create this situation? Any ideas as to how to
> proceed, and end up with a reliable rig?
>
> Thanks,
>
> 72,
> Stephen
> VE7NSD
>

3024. 2N7000 vs BS170

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-05 02:02:47 UTC
From: WA0ITP
Topic: 3024 Message: 3024

I looked at 2N7000 vs BS170 data sheets a coupla weeks ago. I think the main differece is that the 170's are rated at 830mw, the 7000's are 400 mw. So I'd guess the main reason for the switch is that Steve wanted a more robust final.

Incidentally, Doug had the prototype PFR-3 at OzarkCon ... vy impressive..

I love this radio stuff !
72, 73 Terry, WAØITP
www.wa0dx.org/wa0itp
www.4sqrp.com
www.hams4u.com

----- Original Message -----
From: radio_kx0r
To: AT_Sprint@yahoogroups.com
Sent: Sunday, May 04, 2008 7:47 PM
Subject: [AT_Sprint] Re: 2N7000 Mounting

--- In AT_Sprint@yahoogroups.com, Stephen Wandling <swandling@...>
wrote:

Stephen,

The ATS-3A and B manuals are very clear on how to mount the three
2N7000 RF power mosfets, but there is no explanation other than that
the board acts as a heatsink.

I mounted mine as flat as I could get them, and I got them to touch
the board by pre-bending the leads prior to soldering. However, I
agree that the leads provide a path for most of the heat to get out.

In the new PFR-3 Steve Weber sorta-clone-of-ATS-rig on Doug Henricks'
site, the three BS170 final mosfets are mounted straight up! Another
part of the BS170 vs 2N7000 mystery.

How come none of you guys said anything about the BS170's mentioned
in my previous post - I'm puzzled that no one responded to this so
far - too bad Steve Weber's not around. I plan to ask him about this
change, just in case the BS170's are really an upgrade with a little
more safety factor.

If you do blow out a final, it may be the zener diode that goes
first. It might short and protect the mosfets. My scope
measurements suggested that on the higher frequency bands, the peak
drain voltage is pretty high - the diode may actually be clipping a
little if the load's not quite heavy enough.

Since no one's complaining here, it must not be much of a problem.

Stephen, if your rig runs well with the mosfets stright up, please
come back here and let us know after you've put some serious hours on
them.

I know this - that after a half-hour ragchew on 20M, at 5W out, my
altoids box case is noticeably warmer than before the QSO...

When Steve W and I discussed the DDS losing-lock problem last year,
we were heating our rigs up with heat guns until things were toasty.
That was at 5W, 12V, and key down for a while...the mosfets never
blew. The driver never blew.

This is one amazing rig!

Someone's going to get 10W out of one before long. Try 6 BS170' and
a larger driver? How about a single IRF510?

72/73

KX0R
Carey

>
> I guess I was trying to SPRINT across the finish line. Too often I
> forget that its the voyage and not the destination that is
important.
> Or maybe subconsciously I thought it wasn't right for those three
FETs
> to be bowing down like that. Anyway, mine don't.
>
> From looking at photos on the site I gather that using the PC
board as
> a heatsink was something that came with the B? Regardless, how
much
> trouble am I in? I have them jammed down pretty close to the
board, but
> if I de-solder the middle connections I might be able to bend them
down
> enough, MAYBE. Then I would need jumpers to connect the middle
pins to
> the board. But, I suspect that the two outer leads are too short
to
> allow the case to be tight to the board.
>
> Or, I could cut a piece of 1/8" aluminum and glue it to the board
and
> snug to the FETs, but that might also inadvertently glue the FETs
onto
> the board. Or, bend some pop can aluminum to snap onto the 3 FETs
and
> also rest on the board, but that might come loose.

>
> Or do nothing, and hope for the best.
>
> Am I the first to create this situation? Any ideas as to how to
> proceed, and end up with a reliable rig?
>
> Thanks,
>
> 72,
> Stephen
> VE7NSD
>

No virus found in this incoming message.
Checked by AVG.
Version: 7.5.524 / Virus Database: 269.23.8/1414 - Release Date: 5/4/2008 12:31 PM

3025. Re: 2N7000 Mounting

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-05 12:29:44 UTC
From: Matt
Topic: 3017 Message: 3025

> Someone's going to get 10W out of one before long. Try 6 BS170' and
> a larger driver? How about a single IRF510?
>
> 72/73
>
> KX0R
> Carey

I doubt running 6 in parallel would work, the devices are never going to be perfectly matched when in different packages, using 2-3 you can usually get ok results but going up higher is not going to get much of an improvement because one device will act as a master and be producing the majority of the power, this device would eventually catastrophically fail. IRF510 might work, but its output capacitance is going to be substantially higher than a 2n700. I'm holding my breath for some of the 8pin soic GaN on Si fets coming out at MTT. very low capacitance, for driving class E they might work great.

Matt
KD8DAO

3026. Re: 2N7000 vs BS170

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-05 21:33:55 UTC
From: Bruce Beford
Topic: 3024 Message: 3026

--- In AT_Sprint@yahoogroups.com, "WA0ITP" <wa0itp@...> wrote:
>
> I looked at 2N7000 vs BS170 data sheets a coupla weeks ago. I
> think the main differece is that the 170's are rated at 830mw,
> the 7000's are 400 mw. So I'd guess the main reason for the
> switch is that Steve wanted a more robust final.
>

You're right Terry, the BS170 has twice the power rating of the 2n7000. The other -major- difference is that the pinout is -reversed-. This is something to take into cosideration if you are thinking of plopping them into your ATS rig.

To me, there is no real mystery why the change. remember that the new PFR-3 is a conglomeration of past efforts. Dan Tayloe's NC2030 used BS170 in the output stage, and these proved to be robust devices (although I -did manage to blow a few. (he he). The resistive SWR bridge in the new radio is also dan's design. Anyway, since Doug has the benefit of two great designers (Steve and Dan), we all reap the rewards of collaboration.

73,
Bruce N1RX

3027. Re: [AT_Sprint] Power Measurement

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-06 00:50:31 UTC
From: WA0ITP
Topic: 3005 Message: 3027

I dont have SSD, but wonder about the V*V/2R calculation based on voltage at the antenna jack. No doubt the design of the probe dictates the 2R in the denominator. At the antenna jack and across a 50 ohm load, how about Vrms^2/50 ?

I like to use the scope across a 50 ohm dummy load and use
((Vp-p/2.8)^2)/50

Whats your favorite formula?

I love this radio stuff !
72, 73 Terry, WAØITP
www.wa0dx.org/wa0itp
www.4sqrp.com
www.hams4u.com

----- Original Message -----
From: Steven Pituch
To: AT_Sprint@yahoogroups.com
Sent: Saturday, May 03, 2008 7:09 PM
Subject: [AT_Sprint] Power Measurement

Hi All,
To properly adjust my output filters on my ATS3b band modules, I've made a pretty accurate dummy load.

I am planning on using the diode detector shown in Figure 7, on page 146, of "Solid State Design" to measure RF Voltage at the antenna jack. Seems to be a fairly accurate way to measure output power at 5 Watts. Any comments?

Note the output power is computed by V*V/(2*R).

Steve, W2MY

No virus found in this incoming message.
Checked by AVG.
Version: 7.5.524 / Virus Database: 269.23.8/1414 - Release Date: 5/4/2008 12:31 PM

3028. Re: Power Measurement

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-06 01:30:36 UTC
From: Steven Pituch
Topic: 3005 Message: 3028

I am not too sure of the math, but I think V*V/2R makes sense. The peak detector measures peak DC Voltage. So RMS is .707. Square that for V*V and you get .5, and that makes the 2 in the denominator.

Does that sound right?

Steve, W2MY
----- Original Message -----
From: WA0ITP
To: AT_Sprint@yahoogroups.com
Sent: Monday, May 05, 2008 7:50 PM
Subject: Re: [AT_Sprint] Power Measurement

I dont have SSD, but wonder about the V*V/2R calculation based on voltage at the antenna jack. No doubt the design of the probe dictates the 2R in the denominator. At the antenna jack and across a 50 ohm load, how about Vrms^2/50 ?

I like to use the scope across a 50 ohm dummy load and use
((Vp-p/2.8)^2)/50

Whats your favorite formula?

I love this radio stuff !
72, 73 Terry, WAØITP

3029. Re: [AT_Sprint] Re: Power Measurement

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-06 01:35:47 UTC
From: WA0ITP
Topic: 3005 Message: 3029

Yep, didnt realize it was a peak detector. Several ways to do the calculations, the most difficult part is obtaining accurate voltage measurements to work with.

I love this radio stuff !
72, 73 Terry, WAØITP
www.wa0dx.org/wa0itp
www.4sqrp.com
www.hams4u.com

----- Original Message -----
From: Steven Pituch
To: AT_Sprint@yahoogroups.com
Sent: Monday, May 05, 2008 8:30 PM
Subject: [AT_Sprint] Re: Power Measurement

I am not too sure of the math, but I think V*V/2R makes sense. The peak detector measures peak DC Voltage. So RMS is .707. Square that for V*V and you get .5, and that makes the 2 in the denominator.

Does that sound right?

Steve, W2MY
----- Original Message -----
From: WA0ITP
To: AT_Sprint@yahoogroups.com
Sent: Monday, May 05, 2008 7:50 PM
Subject: Re: [AT_Sprint] Power Measurement

I dont have SSD, but wonder about the V*V/2R calculation based on voltage at the antenna jack. No doubt the design of the probe dictates the 2R in the denominator. At the antenna jack and across a 50 ohm load, how about Vrms^2/50 ?

I like to use the scope across a 50 ohm dummy load and use
((Vp-p/2.8)^2)/50

Whats your favorite formula?

I love this radio stuff !
72, 73 Terry, WAØITP

No virus found in this incoming message.
Checked by AVG.
Version: 7.5.524 / Virus Database: 269.23.8/1414 - Release Date: 5/4/2008 12:31 PM

3030. (no subject)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-07 03:22:48 UTC
From: Stephen Wandling
Topic: 3030 Message: 3030

I had no trouble centering the LO in the filter passband, but when I got to Step 5 the signal at the earphone is clipped except when shifted way off peak. Of course the clipped waveform doesn't change in amplitude as you adjust CT1. I am using Visual Analyser and it does have a 'signal strength' scale (vertical bar graph) that showed the signal increasing, then staying the same and then decreasing, so I was able to guesstimate where centre (max amplitude) was.

Is this clipped waveform what others find when they're at this setup stage?

I had it fired up on 40M today and the receiver is very sweet. I have only measured output at about 1.9 watts (9.5 volts RMS across 50 ohms) with the rig's battery reading about 8.5 volts, but I am not sure that my rf probe is reliable. I built this probe today (http://www.io.com/~n5fc/rfprobe2.htm) , but don't have any way to check it out yet.

Now to build all the band filters (30M is done). Then its time to put it in the box.

72,
Stephen
VE7NSD

3031. Re: [AT_Sprint] Local Oscillator frequency trim

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-07 04:16:42 UTC
From: Stephen Wandling
Topic: 3030 Message: 3031

Sorry about no subject! I had one but . . . . . .

Stephen Wandling wrote:
>
> I had no trouble centering the LO in the filter passband, but when I got
> to Step 5 the signal at the earphone is clipped except when shifted way
> off peak. Of course the clipped waveform doesn't change in amplitude as
> you adjust CT1. I am using Visual Analyser and it does have a 'signal
> strength' scale (vertical bar graph) that showed the signal increasing,
> then staying the same and then decreasing, so I was able to guesstimate
> where centre (max amplitude) was.
>
> Is this clipped waveform what others find when they're at this setup
> stage?
>
> I had it fired up on 40M today and the receiver is very sweet. I have
> only measured output at about 1.9 watts (9.5 volts RMS across 50 ohms)
> with the rig's battery reading about 8.5 volts, but I am not sure that
> my rf probe is reliable. I built this probe today
> (http://www.io.com/~n5fc/rfprobe2.htm
> <http://www.io.com/%7En5fc/rfprobe2.htm>) , but don't have any way to
> check
> it out yet.
>
> Now to build all the band filters (30M is done). Then its time to put
> it in the box.
>
> 72,
> Stephen
> VE7NSD
>
>

3032. (no subject)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-07 05:23:09 UTC
From: radio_kx0r
Topic: 3030 Message: 3032

--- In AT_Sprint@yahoogroups.com, Stephen Wandling <swandling@...>
wrote:

Stephen,

Congratulations on getting your rig working!

Step 5 and 6 center the audio frequency - the beat frequency
determined by the IF and BFO - in the AUDIO passband. The ATS rigs
have a very peaked audio response. The audio response is designed to
sharpen the selectivity of the receiver.

If you sweep an audio signal through the ATS-3 audio passband, it
will show a significant peak near 600 Hz. Steve Weber says the Q of
the headphone amplifier/filter U3b is about 5. You need to take your
audio output from the headphone output line for any measurements or
adjustments relating to the audio peak frequency.

I used a wonderful old HP-400D AC VTVM for all my audio tests on my
ATS rigs. There is a very distinct peak near 600 Hz, and any
clipping is minimal. The rig does have some audio AGC/limiting, but
the audio filtering of the last stage helps to clean up any
distortion products.

If you're connected to a computer soundcard, and you're seeing a
flat, clipped response, perhaps your signal level is too high for the
soundcard, and clipping is occurring at that level. Try attenuating
it with a pot.

Instead of using a computer with many additional variables, I'd
suggest using a scope on the headphone output, or an HP400D meter, or
both (what I did). Here's a key point: the headphone op amp wants to
see a low-Z load similar to what your headphones are. So go ahead
and connect your favorite headphones, or a resistor, to the headphone
jack for any tests you do. I found that the frequency of audio
resonance shifts slightly depending on the audio load impedance.
This is an effect - but not really a problem. You may notice it on
the air if you use a headphone volume control. When you turn up the
control, the load Z shifts downward, and the frequency response
shifts upward. It's about one click on the UP-DOWN buttons. You'll
hear it if you're aware of audio frequencies.

I found that the audio peak on my ATS-3B shifted from 590 Hz with a
high-Z audio load up to about 640 Hz with a 10 ohm resistive load.
The Q also increased as the load decreased, so the audio peak is a
little sharper with the volume turned up. Your results may vary,
since headphones are complex, but there are effects.

In the end I shifted my headphone amplifier's peak response down a little by increasing C22 and C23 a bit. This is an easy mod if you like a lower BFO tone. Remember to redo the BFO adjustment in steps 5 and 6 if you mess with the audio peak.

If your receiver sounds OK, it's probably working well. If you test it with a sig gen, and you run the RF input up, the audio should start limiting when the RF input gets above about -80 dbm. This assumes that your RF filter modules are peaked really well. The limiting level is LOUD with efficient headphones, so a volume control is a good idea.

There's more stuff on these subjects here - please use the SEARCH feature to find interesting stuff in our previous posts, and have a look in the FILES and PHOTOS. I'm pretty sure I posted an audio plot in there somewhere.

No doubt the ATS-3 receiver is one of the best simple CW receivers ever designed. You can hear less than 0.1 uV with it if you work with the filter modules to be sure they're really peaked.

Hope you enjoy it as much as I do.

73,

Carey
KX0R
>
> I had no trouble centering the LO in the filter passband, but when I got
> to Step 5 the signal at the earphone is clipped except when shifted way
> off peak. Of course the clipped waveform doesn't change in amplitude as
> you adjust CT1. I am using Visual Analyser and it does have a 'signal
> strength' scale (vertical bar graph) that showed the signal increasing,
> then staying the same and then decreasing, so I was able to guesstimate
> where centre (max amplitude) was.
>
> Is this clipped waveform what others find when they're at this setup stage?
>
> I had it fired up on 40M today and the receiver is very sweet. I have
> only measured output at about 1.9 watts (9.5 volts RMS across 50 ohms)
> with the rig's battery reading about 8.5 volts, but I am not sure that
> my rf probe is reliable. I built this probe today
> (http://www.io.com/~n5fc/rfprobe2.htm) , but don't have any way to

check
> it out yet.
>
> Now to build all the band filters (30M is done). Then its time to
put
> it in the box.
>
> 72,
> Stephen
> VE7NSD
>

3033. Re: PA for the ATS?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-07 12:30:14 UTC
From: dombaines
Topic: 3005 Message: 3033

--- In AT_Sprint@yahoogroups.com, Kurt Savegnago <ksaves2@...> wrote:
>
> Someone I bet will kit it here. Looks to doggone
> good.
>
> Kurt KC9LDH
> --- Roland Whitsitt <n5vwn@...> wrote:
>
> > Anybody know how I can aquire one of those amp kits
> > shown in the file section? I think it
> > was made by JN1GLB. And what's the cost?
> > Roland N5VWN in Californy

Hi,

I am working on a through hole version, same 2.7" x 2" format so fits in an altoid tin with locally available transistors and diodes, all either Mouser or Digikey variants. I am using ExpressPCB to create the PCB layout which means Blue Press n Peel film means I can etch my own. I hope to have it ready for FDIM 2008.

A few have looked at reworking the NB6M Miniboots PA for a while and Chuck Carpenter has a nice little PA out soon that is using a modern alternative for the IRF510 MOSFET which should run cooler and more efficiently, last I read it should be out about the time FDIM 2008 comes around. Note that JN1GLB, Makota-san is rekitting and you can order from him directly. 8500 Yen is about £41 or $80

73

Dom
M1KTA

UPDATE 5MAY08
Please contact Mr. Kasahara. He has volunteered to supply this kit to all interested parties for 8500 yen to the paypal address kasahara@.... Paypal will take care of the currency conversion and exchange rate, etc.
Best of luck building this kit, and please upload photos to http://www.flickr.com/groups/ats_qrp/ for discussion.
This isn't necessarily QRP, but certainly a top-flight kit that will be a pleasure to build. I am also eager to have more English-speaking hams look at the PDF I translated to tell me where I made mistakes. I am very receptive to that.
Best 73,
Jonathan Haynes

If you have Japanese fonts installed and want to see his original message, here it is:
こんにち;は、Jonathanさん、
私は、数台のKitを用意することが可能です。
彼ら2395;は、直接私にメーﾞ3;を送るように伝えてください。
subjectは、必 378;[ALTOIS PA]と書いてもらっ 390;ください。
価格はｩ9;日本円で8500円です。Paypalでの支払いとなります。
I can prepare for some Kit.
Tell them to send mail to me directly(kasahara@...).
A price is 8500 yen(paid by Paypal).
Makoto Kasahara / JN1GLB

3034. Re: [AT_Sprint] Re: PA for the ATS?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-07 12:46:33 UTC
From: makoto kasahara
Topic: 3005 Message: 3034

Hi, All...
If you want ALTOIDS PA,
Please e-mail to me, at first.
The rest of the present kits are one.
Makoto Kasahara / JN1GLB

----- Original Message ----
From: dombaines <dombaines@...>
To: AT_Sprint@yahoogroups.com
Sent: Wednesday, May 7, 2008 9:30:14 PM
Subject: [AT_Sprint] Re: PA for the ATS?

--- In AT_Sprint@yahoogrou ps.com, Kurt Savegnago <ksaves2@... > wrote:
>
> Someone I bet will kit it here. Looks to doggone
> good.
>
> Kurt KC9LDH
> --- Roland Whitsitt <n5vwn@...> wrote:
>
> > Anybody know how I can aquire one of those amp kits
> > shown in the file section? I think it
> > was made by JN1GLB. And what's the cost?
> > Roland N5VWN in Californy

Hi,

I am working on a through hole version, same 2.7" x 2" format so fits in an altoid tin with locally available transistors and diodes, all either Mouser or Digikey variants. I am using ExpressPCB to create the PCB layout which means Blue Press n Peel film means I can etch my own. I hope to have it ready for FDIM 2008.

A few have looked at reworking the NB6M Miniboots PA for a while and Chuck Carpenter has a nice little PA out soon that is using a modern alternative for the IRF510 MOSFET which should run cooler and more efficiently, last I read it should be out about the time FDIM 2008 comes around. Note that JN1GLB, Makota-san is rekitting and you can order from him directly. 8500 Yen is about £41 or $80

73

Dom
M1KTA

UPDATE 5MAY08
Please contact Mr. Kasahara. He has volunteered to supply this kit to

all interested parties for 8500 yen to the paypal address
kasahara@nisiq. net. Paypal will take care of the currency conversion
and exchange rate, etc.
Best of luck building this kit, and please upload photos to
http://www.flickr. com/groups/ ats_qrp/ for discussion.
This isn't necessarily QRP, but certainly a top-flight kit that will
be a pleasure to build. I am also eager to have more English-speaking
hams look at the PDF I translated to tell me where I made mistakes. I
am very receptive to that.
Best 73,
Jonathan Haynes

If you have Japanese fonts installed and want to see his original
message, here it is:
こん に& #12385;&# 12399;、 Jonathan& #12373;&# 12435;、
私は 、;& #25968;&# 21488;の Kitを 用& #24847;&# 12377;る こ& #12392;&# 12364;可 能& #12391;&# 12377;。
ô44;ら に& #12399;&# 12289;直 接& #31169;&# 12395;メ 一& #12523;&# 12434;送 る& #12424;&# 12358;に;
伝& #12360;&# 12390;く だ& #12373;&# 12356;。
subjectは 、& #24517;&# 12378;[ALTOIS PA]と& #26360;&# 12356;て も& #12425;&# 12387;て く& #12384;&#
12373; 356; 。
価格 は& #12289;&# 26085;本 円& #12391;8500& #20870;&# 12391;す 。Paypal& #12391;&# 12398;903; 払&
#12356;&# 12392;な り& #12414;&# 12377;。
I can prepare for some Kit.
Tell them to send mail to me directly(kasahara@nisiq. net).
A price is 8500 yen(paid by Paypal).
Makoto Kasahara / JN1GLB

_____
Be a better friend, newshound, and
know-it-all with Yahoo! Mobile. Try it now.
http://mobile.yahoo.com/;_ylt=Ahu06i62sR8HDtDypao8Wcj9tAcJ

3035. Re: [AT_Sprint] Centering the Beat note (was (unknown))

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-07 17:35:24 UTC
From: Stephen Wandling
Topic: 3030 Message: 3035

Carey,

Thanks for all of the info and suggestions. Two of your suggestions I had already tried. I lowered the microphone input to the sound card to almost zero and the clipping remained. I also used a splitter on the phone jack so I could listen while I did the adjustment, so that should have brought the impedance down to where the filter was happy.

I don't have a scope or HP400D, although I do remember using one when I worked for Lenkurt Electric in San Carlos, CA in the 60's.

My gut feeling is that there is clipping going on in the ATS during this test. Whether this is a result of the level of the test tone generated for the test being too high, or a problem in the circuit, I don't know. My hearing is old and mushy, but the rig sounds pretty good with on the air signals.

I was on the SKCC (Straight Key Century Club) sked page and announced I was sending a CQ on 7062 and a guy in Santa Fe, TX gave me a 229. He said he only knew it was me because he saw my posting on the sked page. No QSO, but this is with the rig laying naked on my bench, connected to the ATU with 16" alligator clip leads, and a dying 9V battery. I think the battery voltage was about 7.5V according to the ATS. I haven't worked at peaking the filter boards yet. I want to get a good 12V supply running first. I don't want to peak them on 9V and then have them set too hot for 12V.

I will do some searches, but the 12V limit is confusing to me. Steve talks about using a freshly charged gel cell, but won't they be higher than 12V? I know guys like N0TU use Li-Poly batteries at 11.1V. I wonder why Steve didn't put in a 12V regulator?

You mention that you "shifted my headphone amplifier's peak response down a little by increasing C22 and C23 a bit". Do you recall how much you shifted them?

Thanks again.

72,
Stephen
VE7NSD

radio_kx0r wrote:
>
> --- In AT_Sprint@yahoogroups.com <mailto:AT_Sprint%40yahoogroups.com>,
> Stephen Wandling <swandling@...>
> wrote:

>
> Stephen,
>
> Congratulations on getting your rig working!
>
> Step 5 and 6 center the audio frequency - the beat frequency
> determined by the IF and BFO - in the AUDIO passband. The ATS rigs
> have a very peaked audio response. The audio response is designed to
> sharpen the selectivity of the receiver.
>
> If you sweep an audio signal through the ATS-3 audio passband, it
> will show a significant peak near 600 Hz. Steve Weber says the Q of
> the headphone amplifier/filter U3b is about 5. You need to take your
> audio output from the headphone output line for any measurements or
> adjustments relating to the audio peak frequency.
>
> I used a wonderful old HP-400D AC VTVM for all my audio tests on my
> ATS rigs. There is a very distinct peak near 600 Hz, and any
> clipping is minimal. The rig does have some audio AGC/limiting, but
> the audio filtering of the last stage helps to clean up any
> distortion products.
>
> If you're connected to a computer soundcard, and you're seeing a
> flat, clipped response, perhaps your signal level is too high for the
> soundcard, and clipping is occurring at that level. Try attenuating
> it with a pot.
>
> Instead of using a computer with many additional variables, I'd
> suggest using a scope on the headphone output, or an HP400D meter, or
> both (what I did). Here's a key point: the headphone op amp wants to
> see a low-Z load similar to what your headphones are. So go ahead
> and connect your favorite headphones, or a resistor, to the headphone
> jack for any tests you do. I found that the frequency of audio
> resonance shifts slightly depending on the audio load impedance.
> This is an effect - but not really a problem. You may notice it on
> the air if you use a headphone volume control. When you turn up the
> control, the load Z shifts downward, and the frequency response
> shifts upward. It's about one click on the UP-DOWN buttons. You'll
> hear it if you're aware of audio frequencies.
>
> I found that the audio peak on my ATS-3B shifted from 590 Hz with a
> high-Z audio load up to about 640 Hz with a 10 ohm resistive load.
> The Q also increased as the load decreased, so the audio peak is a
> little sharper with the volume turned up. Your results may vary,
> since headphones are complex, but there are effects.
>
> In the end I shifted my headphone amplifier's peak response down a
> little by increasing C22 and C23 a bit. This is an easy mod if you
> like a lower BFO tone. Remember to redo the BFO adjustment in steps
> 5 and 6 if you mess with the audio peak.

>
> If your receiver sounds OK, it's probably working well. If you test
> it with a sig gen, and you run the RF input up, the audio should
> start limiting when the RF input gets above about -80 dbm. This
> assumes that your RF filter modules are peaked really well. The
> limiting level is LOUD with efficient headphones, so a volume control
> is a good idea.
>
> There's more stuff on these subjects here - please use the SEARCH
> feature to find interesting stuff in our previous posts, and have a
> look in the FILES and PHOTOS. I'm pretty sure I posted an audio plot
> in there somewhere.
>
> No doubt the ATS-3 receiver is one of the best simple CW receivers
> ever designed. You can hear less than 0.1 uV with it if you work
> with the filter modules to be sure they're really peaked.
>
> Hope you enjoy it as much as I do.
>
> 73,
>
> Carey
> KX0R
> >
> > I had no trouble centering the LO in the filter passband, but when
> I got
> > to Step 5 the signal at the earphone is clipped except when shifted
> way
> > off peak. Of course the clipped waveform doesn't change in
> amplitude as
> > you adjust CT1. I am using Visual Analyser and it does have
> a 'signal
> > strength' scale (vertical bar graph) that showed the signal
> increasing,
> > then staying the same and then decreasing, so I was able to
> guesstimate
> > where centre (max amplitude) was.
> >
> > Is this clipped waveform what others find when they're at this
> setup stage?
> >
> > I had it fired up on 40M today and the receiver is very sweet. I
> have
> > only measured output at about 1.9 watts (9.5 volts RMS across 50
> ohms)
> > with the rig's battery reading about 8.5 volts, but I am not sure
> that
> > my rf probe is reliable. I built this probe today
> > (http://www.io.com/~n5fc/rfprobe2.htm
> <http://www.io.com/%7En5fc/rfprobe2.htm>) , but don't have any way to

> check
> > it out yet.
> >
> > Now to build all the band filters (30M is done). Then its time to
> put
> > it in the box.
> >
> > 72,
> > Stephen
> > VE7NSD
> >
>
>

3036. Re: Centering the Beat note (was (unknown))

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-08 01:00:44 UTC
From: radio_kx0r
Topic: 3030 Message: 3036

--- In AT_Sprint@yahoogroups.com, Stephen Wandling <swandling@...>
wrote:

Stephen,

I can't be sure about your clipping problem. I remember that the rig can be set up just by ear - you just set the BFO so the audio sounds like it's at the center of the audio passband. I think doing it by ear would be better than trying to use a digital interface, etc.

Be sure to search the messages here for other ideas - some have used computers with a program called Spectrogram, I think, to look at the audio passband of the ATS rigs - they have had good results.

I believe you should follow Steve's alignment instructions so that the rig ends up transmitting on exactly the same frequency it receives on. The DDS is used to set receive and transmit frequencies, as well as RIT, and the setup routine in the manual makes sure that the firmware is programmed with the correct offsets so everything comes out right.

You're right that you should do all your alignment and adjustments with a regulated supply. You're also right to peak the filter modules with a 12V supply is you plan to run on 12V (ever).

Yes, a peaked lead-acid battery might be above 13.0V, depending on the chemistry and how long it's been off the charger.

I use three Li ion cells and they measure about 12.4V right after charging. The load of the rig during transmit, along with a polyswitch, a protective circuit in the pack, wires, connectors, a switch, and the protection diode in the rig reduce the final voltage somewhat. Lots of people here have suggested putting a diode or two in series with a 13V battery. It would be easy to put a switch in for when the battery's freh and for when it's down. Reistors work OK with this rig also.

Steve didn't put in a regulator because there isn't room, and it isn't desirable for most of us. When we go portable with a small battery, we don't want to lose any energy in a regulator. The rig is tolerant of voltage sag and weak batteries, so it will continue running until almost all the energy is used. A regulator would subtract from the available energy. You can always add one externally. The QBSA has an adjustable voltage regulator - it's fine - an LM317T. Steve designed it to top out at about 11V, but some of us tricked it to go up to 12.0V. I posted this here some time ago. The QBSA and the ATS-3 rigs make a really nice setup for

home use.

It's easy to find HP400's at hamfests. They are common and usually go for $10 around here. Not very energy-efficient, but work well. An ordinary AC voltmeter, DVM type, will work fine at 600 Hz. Try that. Analog AC meters are fine too - Simpson 260, or whatever you have. I agree that if you can't see the peak as you adjust the BFO trimmer, you do have clipping for some reason. I used a scope for those tests and did not see clipping. If you have clipping in the audio chain, you'll probably need a scope to debug that, unless you can inspect and find the problem.

I made a big mistake in my previous message, where I mentioned C22 and C23; those are the original wrong component designators in my manual; the designators on the PCB for my ATS-3B are C20 and C21. These are also C20 and C21 on the revised schematic. I raised C20 and C21 by adding 560 pF in parallel with each. This has a small effect, since C20 and C21 are increased about 5.6% (they are both .01 uF or 10,000 pF). I'd say don't bother unless you really care about your audio frequency.

Now I'm going to admit some non-understanding here, and hope someone else knows the answer:

If we set up the audio peak on an ATS-3B at 400 Hz instead of 600 Hz, by increasing C20 and C21, and then re-adjusting the BFO trimmer, would the rig still transmit and receive at the same frequency, on all bands? Remember that the rig's LO is on the high side of the IF on 80 meters, and on the low side on other bands. Does the audio tone have to be 600 Hz for everything to work right? Am I stupid for adjusting my audio tone down a little? Who knows for sure (Steve knows)? Mike?

Some day soon I'll check to see if my ATS-3B actually receives and transmits on the same frequency on all bands. This is a hassle, but with a counter and a sig gen it's not too hard. It can be done with another rig (modern rig) and attenuators also. For casual operating an offset is no big deal, but for DXing and serious operating the rig needs to be spot-on.

Lots of great questions Stephen - sorry I don't quite have all the answers tonight.

73,

Carey
KX0R

>
> Carey,
>
> Thanks for all of the info and suggestions. Two of your

suggestions I
> had already tried. I lowered the microphone input to the sound
card to
> almost zero and the clipping remained. I also used a splitter on
the
> phone jack so I could listen while I did the adjustment, so that
should
> have brought the impedance down to where the filter was happy.
>
> I don't have a scope or HP400D, although I do remember using one
when I
> worked for Lenkurt Electric in San Carlos, CA in the 60's.
>
> My gut feeling is that there is clipping going on in the ATS during
this
> test. Whether this is a result of the level of the test tone
generated
> for the test being too high, or a problem in the circuit, I don't
know.
> My hearing is old and mushy, but the rig sounds pretty good with on
the
> air signals.
>
> I was on the SKCC (Straight Key Century Club) sked page and
announced I
> was sending a CQ on 7062 and a guy in Santa Fe, TX gave me a 229.
He
> said he only knew it was me because he saw my posting on the sked
page.
> No QSO, but this is with the rig laying naked on my bench,
connected to
> the ATU with 16" alligator clip leads, and a dying 9V battery. I
think
> the battery voltage was about 7.5V according to the ATS. I haven't
> worked at peaking the filter boards yet. I want to get a good 12V
> supply running first. I don't want to peak them on 9V and then
have
> them set too hot for 12V.
>
> I will do some searches, but the 12V limit is confusing to me.
Steve
> talks about using a freshly charged gel cell, but won't they be
higher
> than 12V? I know guys like N0TU use Li-Poly batteries at 11.1V. I
> wonder why Steve didn't put in a 12V regulator?
>
> You mention that you "shifted my headphone amplifier's peak
response
> down a little by increasing C22 and C23 a bit". Do you recall how
much

> you shifted them?
>
> Thanks again.
>
> 72,
> Stephen
> VE7NSD
>

3037. Re: [AT_Sprint] Re: Centering the Beat note (was (unknown))

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-08 01:24:10 UTC
From: Michael Harnage
Topic: 3030 Message: 3037

See inline below:

--- radio_kx0r <careyfuller@...> wrote:

> Now I'm going to admit some non-understanding here,
> and hope someone
> else knows the answer:
>
> If we set up the audio peak on an ATS-3B at 400 Hz
> instead of 600 Hz,
> by increasing C20 and C21, and then re-adjusting the
> BFO trimmer,
> would the rig still transmit and receive at the same
> frequency, on
> all bands?
> Remember that the rig's LO is on the
> high side of the IF
> on 80 meters, and on the low side on other bands.
> Does the audio
> tone have to be 600 Hz for everything to work right?
> Am I stupid for
> adjusting my audio tone down a little? Who knows
> for sure (Steve
> knows)? Mike?

Yes it should be fine only your sidetone will not be 400Hz. I like my sidetone to match the offset, to make it easier to zerobeat.

With my firmware you can change the audio sidetone to a lower frequency with out having to modify hardware. With Steve's it will be a little harder because he uses the timers a little differently than I do.

You can alter the final op amp in the audio chain to be a lower center freq than 600Hz or even change it to a low pass filter.

As far as accuracy on all bands: If you follow Steve's or my calibration procedure's you can be spot on all bands. Once you get the DDS "fudge" factor you are good to go for all the bands. You should be able to get within 10Hz at 10MHz which would make you 20Hz off at 20MHz. Pretty good if you ask me.

-mike/w1mt

Be a better friend, newshound, and
know-it-all with Yahoo! Mobile. Try it now.
http://mobile.yahoo.com/;_ylt=Ahu06i62sR8HDtDypao8Wcj9tAcJ

3038. Finally adjusted the band modules

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-08 02:22:01 UTC
From: Steven Pituch
Topic: 3030 Message: 3038

Hallelujah!
I am so happy. I may have finished my ATS3b. Here are my numbers for 12.00 Volts:

BAND	Volts PWR	Amps
80M	22.6 5.1	.634
40M	22.6 5.1	.668
30M	23.4 5.5	.745
20M	23.1 5.3	.741
17M	22.6 5.1	.753
15M	23.2 5.4	.728

Some of you may recall that I had previously used a dummy load that was 13% high and my OHR WM-1. This turned out to be a bad combination. I was approaching 1 Amp just to get "5" Watts which was really closer to 7 Watts. Its a tribute to the design in that I didn't have a melt-down.

I built a simple peak detector, and a precision dummy load. I put them both in a plastic box with binding posts for the voltmeter and a bnc jack to connect to the ATS3b. Once it was built it made taking accurate power measurements very easy. Just square the DC voltage reading and move the decimal point over two places: (V*V/(2*R). This tool is a keeper. I wonder why Doug Hendricks hasn't made a kit of it.

I need to post a schematic of the tool and some photos. It is in Solid State Design on page 146, Figure 7. I will also post my adjustments to each band modulw for reference for other builders.

Thanks everyone on the list for the help. I was ready to give up several times thinking that I had terminally damaged the kit while building it. However, I had very few errors. It was actually a relatively easy kit to build.

I am looking foward to bringing the ATS3b, SLT tuner, and my Jackite 31' pole to a picnic this Saturday and operating outdoors.

Does anyone use dropping diodes to reduce the voltage from a gell cell? I would think a 1 Amp diode with a .6 volt drop would be ideal.

Steve, W2MY

3039. Re: [AT_Sprint] Re: Centering the Beat note (was (unknown))

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-08 05:12:13 UTC
From: Stephen Wandling
Topic: 3030 Message: 3039

Carey,

Once again, thanks for the great response.

I did initially try to set the BFO by ear, but only heard the change in pitch, but not in amplitude. There was no 'peak' as I was expecting.

I can try to do some tracing, but I need to know what's happening when we're doing this adjustment. Apparently, the rig simulates a CW signal coming in, but I'm not familiar enough with the circuit to know how this was done. (Where are the tubes?? :-))

Just had my first QSO on this rig on 80M. Built the 80M filter board this afternoon, but the receive was weak and CT3 had no effect. I have now confirmed Steve's statement, that if you mix up the 4 wires on LF3 you will have poor reception. Not having any more 32 ga wire, I removed the coil, sorted the wires, added extensions and put it back in. I live in the bush here and will see if anyone sells 32 ga in Kamloops tomorrow. I will have to wind a new coil as the extensions provide a great opportunity for shorts. My last 9V battery was down to 7.2 by the end of the QSO.

This leads to another question: each time I passed it back, the CW tone was down and I had to tune down one click to get it right again. Is this a result of the dropping battery voltage, as I presume it is?

I have an old 12V 7Ah gel cell on the charger now and will see what the rig does with more juice.

I have to get my head around this sidetone issue, because I want to be sending and receiving on the same frequency. I noted Michael's response to your "non-understanding" below, but I'm still unclear as to what's going on in the rig. He said your sidetone would not be 400Hz, but if you tune so you are hearing 400Hz, the question is what is the offset, right?

You mention 3 Li-Ion cells at 13.0V. Is it the Li-Poly cells that are 3.7V per cell, giving 11.1V for 3 cells?

I think I need to take a break from this for today. Thanks again.

72,
Stephen
VE7NSD

radio_kx0r wrote:

--- In AT_Sprint@yahoogroups.com, Stephen Wandling ..>
wrote:

Stephen,

I can't be sure about your clipping problem. I remember that the rig can be set up just by ear - you just set the BFO so the audio sounds like it's at the center of the audio passband. I think doing it by ear would be better than trying to use a digital interface, etc.

Be sure to search the messages here for other ideas - some have used computers with a program called Spectrogram, I think, to look at the audio passband of the ATS rigs - they have had good results.

I believe you should follow Steve's alignment instructions so that the rig ends up transmitting on exactly the same frequency it receives on. The DDS is used to set receive and transmit frequencies, as well as RIT, and the setup routine in the manual makes sure that the firmware is programmed with the correct offsets so everything comes out right.

You're right that you should do all your alignment and adjustments with a regulated supply. You're also right to peak the filter modules with a 12V supply is you plan to run on 12V (ever).

Yes, a peaked lead-acid battery might be above 13.0V, depending on the chemistry and how long it's been off the charger.

I use three Li ion cells and they measure about 12.4V right after charging. The load of the rig during transmit, along with a polyswitch, a protective circuit in the pack, wires, connectors, a switch, and the protection diode in the rig reduce the final voltage somewhat. Lots of people here have suggested putting a diode or two in series with a 13V battery. It would be easy to put a switch in for when the battery's freh and for when it's down. Reistors work OK with this rig also.

Steve didn't put in a regulator because there isn't room, and it isn't desirable for most of us. When we go portable with a small battery, we don't want to lose any energy in a regulator. The rig is tolerant of voltage sag and weak batteries, so it will continue running until almost all the energy is used. A regulator would subtract from the available energy. You can always add one externally. The QBSA has an adjustable voltage regulator - it's fine - an LM317T. Steve designed it to top out at about 11V, but some of us tricked it to go up to 12.0V. I posted this here some time ago. The QBSA and the ATS-3 rigs make a really nice setup for home use.

It's easy to find HP400's at hamfests. They are common and usually go for $10 around here. Not very energy-efficient, but work well. An ordinary AC voltmeter, DVM type, will work fine at 600 Hz. Try that. Analog AC meters are fine too - Simpson 260, or whatever you have. I agree that if you can't see the peak as you adjust the BFO trimmer, you do have clipping for some reason. I used a scope for those tests and did not see clipping. If you have clipping in the audio chain, you'll probably need a scope to debug that, unless you can inspect and find the problem.

I made a big mistake in my previous message, where I mentioned C22 and C23; those are the original wrong component designators in my manual; the designators on the PCB for my ATS-3B are C20 and C21. These are also C20 and C21 on the revised schematic. I raised C20 and C21 by adding 560 pF in parallel with each. This has a small effect, since C20 and C21 are increased about 5.6% (they are both .01 uF or 10,000 pF). I'd say don't bother unless you really care about your audio frequency.

Now I'm going to admit some non-understanding here, and hope someone else knows the answer:

If we set up the audio peak on an ATS-3B at 400 Hz instead of 600 Hz, by increasing C20 and C21, and then re-adjusting the BFO trimmer, would the rig still transmit and receive at the same frequency, on all bands? Remember that the rig's LO is on the high side of the IF on 80 meters, and on the low side on other bands. Does the audio tone have to be 600 Hz for everything to work right? Am I stupid for adjusting my audio tone down a little? Who knows for sure (Steve knows)? Mike?

Some day soon I'll check to see if my ATS-3B actually receives and transmits on the same frequency on all bands. This is a hassle, but with a counter and a sig gen it's not too hard. It can be done with another rig (modern rig) and attenuators also. For casual operating an offset is no big deal, but for DXing and serious operating the rig needs to be spot-on.

Lots of great questions Stephen - sorry I don't quite have all the answers tonight.

73,

Carey
KX0R

>
> Carey,
>
> Thanks for all of the info and suggestions. Two of your
suggestions I
> had already tried. I lowered the microphone input to the sound
card to
> almost zero and the clipping remained. I also used a splitter on
the
> phone jack so I could listen while I did the adjustment, so that
should
> have brought the impedance down to where the filter was happy.
>
> I don't have a scope or HP400D, although I do remember using one
when I
> worked for Lenkurt Electric in San Carlos, CA in the 60's.
>

> My gut feeling is that there is clipping going on in the ATS during
this
> test. Whether this is a result of the level of the test tone
generated
> for the test being too high, or a problem in the circuit, I don't
know.
> My hearing is old and mushy, but the rig sounds pretty good with on
the
> air signals.
>
> I was on the SKCC (Straight Key Century Club) sked page and
announced I
> was sending a CQ on 7062 and a guy in Santa Fe, TX gave me a 229.
He
> said he only knew it was me because he saw my posting on the sked
page.
> No QSO, but this is with the rig laying naked on my bench,
connected to
> the ATU with 16" alligator clip leads, and a dying 9V battery. I
think
> the battery voltage was about 7.5V according to the ATS. I haven't
> worked at peaking the filter boards yet. I want to get a good 12V
> supply running first. I don't want to peak them on 9V and then
have
> them set too hot for 12V.
>
> I will do some searches, but the 12V limit is confusing to me.
Steve
> talks about using a freshly charged gel cell, but won't they be
higher
> than 12V? I know guys like N0TU use Li-Poly batteries at 11.1V. I
> wonder why Steve didn't put in a 12V regulator?
>
> You mention that you "shifted my headphone amplifier's peak
response
> down a little by increasing C22 and C23 a bit". Do you recall how
much
> you shifted them?
>
> Thanks again.
>
> 72,
> Stephen
> VE7NSD
>

3040. Re: Centering the Beat note (was (unknown))

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-08 05:27:24 UTC
From: radio_kx0r
Topic: 3030 Message: 3040

--- In AT_Sprint@yahoogroups.com, Stephen Wandling <swandling@...>
wrote:

Stephen,

I did some measurements tonight and this is what I found for my ATS-
3B:

1) The audio peak is at about 610-620 Hz now, with C20 and C21
increased by 560 pf parallel caps. This peak was checked with
headphones having a parallel impedance of about 30 ohms. With a
higher Z, such as when the headphone volume is reduced, I have an
audio peak in the 590-600 Hz range. So I'm not tuned for a lower
pitch audio tone at all. Probably C20 and C21 are just a little on
the small side of their .01 uF nominal value, so the parallel caps
just make the circuit work as designed.

2) The transmit and receive frequencies measure within 20 to 30 Hz of
each other at 3.56, 7.04, and 14.06 Mhz. I used a counter, a crystal
oscillator, and some attenuators to compare the input and output
frequencies of the rig. Since the rig tunes in 50 Hz steps, and the
audio peak is broad enough that sometimes two steps are roughly equal
to the ear, this is fine. On all three bands, when listening, the
error was such that the second, almost equally loud frequency step
next to the apparent peak step was on the other side of the measured
transmit signal. 80M has no more offset than 40M or 20M; if anything
80M is almost spot-on. So there's no problem with more offset when
the LO's on the other side of the signal, as on 80M, on my rig.

3) I would have to spend a lot of time with more and better equipment
to get a better alignment. The receive-transmit frequency match is
better than most QRP analog rigs can achieve with ordinary
components, separate oscillators, and multiple temperature drifts,
particularly after some knocking around.

4) Since the ATS rigs tune in 50 Hz steps, you're not going to get
closer to the other station's frequency than the buttons allow. With
good ears you can always tune within 25 Hz or less, with an
additional error due to alignment.

5) So we should do our best with the alignment. Steve has provided
an excellent method to minimize frequency errors, while making the
procedure simple and reasonable.

6) My rig has been on a bunch of winter campouts and backpack trips
since I aligned it several months ago. I was really pleased to see
my errors coming in so tight. Of course, there's always room for

improvement in specs and adjustments, but not with my equipment. My test gear is only about one order of magnitude more accurate than this rig - as near as I can tell - HI!

7) I think it's worth checking the audio peak frequency with YOUR headphones plugged in, and a counter connected - if it's not close to 600 Hz, the T-R offset may be worse on 80 than on other bands, or vice-versa. This is the issue I'm not real clear on - but with 600 Hz you'll be right for sure, since Steve says that's the design peak.

8) You can ignore all this stuff if your rig works OK.

Stephen, my rig does have a somewhat clipped sound - actually a clipped and filtered sound - when I run the RF input up into saturation. Both my ATS-3B and ATS-3A sound about the same (my "A" doesn't have any extra caps on the output filter, and it's peaked near 600 Hz). All measurements above were done with the RF input reduced to a low level, maybe about -100 dbm, so I could hear the audio peak without any AGC or clipping effects.

72,

Carey
KX0R

>
> Carey,
>
> Thanks for all of the info and suggestions. Two of your
suggestions I
> had already tried. I lowered the microphone input to the sound
card to
> almost zero and the clipping remained. I also used a splitter on
the
> phone jack so I could listen while I did the adjustment, so that
should
> have brought the impedance down to where the filter was happy.
>
> I don't have a scope or HP400D, although I do remember using one
when I
> worked for Lenkurt Electric in San Carlos, CA in the 60's.
>
> My gut feeling is that there is clipping going on in the ATS during
this
> test. Whether this is a result of the level of the test tone
generated
> for the test being too high, or a problem in the circuit, I don't
know.
> My hearing is old and mushy, but the rig sounds pretty good with on
the
> air signals.
>

> I was on the SKCC (Straight Key Century Club) sked page and
announced I
> was sending a CQ on 7062 and a guy in Santa Fe, TX gave me a 229.
He
> said he only knew it was me because he saw my posting on the sked
page.
> No QSO, but this is with the rig laying naked on my bench,
connected to
> the ATU with 16" alligator clip leads, and a dying 9V battery. I
think
> the battery voltage was about 7.5V according to the ATS. I haven't
> worked at peaking the filter boards yet. I want to get a good 12V
> supply running first. I don't want to peak them on 9V and then
have
> them set too hot for 12V.
>
> I will do some searches, but the 12V limit is confusing to me.
Steve
> talks about using a freshly charged gel cell, but won't they be
higher
> than 12V? I know guys like N0TU use Li-Poly batteries at 11.1V. I
> wonder why Steve didn't put in a 12V regulator?
>
> You mention that you "shifted my headphone amplifier's peak
response
> down a little by increasing C22 and C23 a bit". Do you recall how
much
> you shifted them?
>
> Thanks again.
>
> 72,
> Stephen
> VE7NSD

3041. Re: [AT_Sprint] Finally adjusted the band modules

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-08 12:16:28 UTC
From: Jim Miller
Topic: 3030 Message: 3041

the surface mount dummy load kit has a diode detector on it.

73

jim ab3cv

3042. Re: PA for the ATS?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-08 12:19:08 UTC
From: Matt
Topic: 3007 Message: 3042

The real trick would be to in the spirit of the original design come up with a class E or more likely (my idea) a class E/F odd hybrid amplifier. I made a couple of quick sketches and calculations into this effort, but am too busy at work to do any real designing, (plus i'm leaving for Tokyo in 7 days) It on my todo list, but based on power densities you should be able to get 50watts out of an altoids tin with a modest heat sink.

Matt
KD8DAO

3043. Re: Finally adjusted the band modules

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-08 13:29:59 UTC
From: Steven Pituch
Topic: 3030 Message: 3043

Yes, a good feature. I ordered one a couple of weeks ago from Norcal, and hope to receive it in a few weeks. At $7.50 it seems to be a good deal. I didn't want to wait so I built my own.

I posted the schematic here:
http://www.pituch.net/p/Steve's%20Page/Radio/ATS3b/ATS3b.htm

Steve, W2MY

----- Original Message -----
From: "Jim Miller" <jim@...>
> the surface mount dummy load kit has a diode detector on it.
>
> 73
>
> jim ab3cv
>

3044. Re: Finally adjusted the band modules

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-08 15:22:30 UTC
From: Steven Pituch
Topic: 3030 Message: 3044

Hi All,
I also posted photos of the band modules. A description of mods on each board will follow. Basically my mods are very similar to KX0R's.
Steve, W2MY
http://www.pituch.net/p/Steve's%20Page/Radio/ATS3b/ATS3b.htm

3045. Re: Centering the Beat note (was (unknown))

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-08 20:15:26 UTC
From: Dave
Topic: 3030 Message: 3045

> I need to know what's happening when we're doing this adjustment.

Hopefully I have this right:

When adjusting the offset, the DDS is programmed to produce the
IF frequency which is then fed to the mixer to put it into the
crystal filter (defaults to 4.914700MHz). The tune-up and tune-down
buttons allow this frequency to be adjusted until the signal is
in the center of the crystal filter's passband. The resulting
frequency becomes the actual IF frequency and the offset applied to
the desired receive operating frequency to cause the DDS to produce
the appropriate LO frequency.

The second step is to adjust the BFO trimmer to cause the BFO to
oscillate at the actual IF frequency offset by the sidetone frequency
(hard-coded at 606Hz in the ATS-3B). The result is that the audio
frequency of the received signal matches that of the sidetone, making
it easy to zero-beat received signals by comparing the sidetone
frequency to the received audio.

> This leads to another question: each time I passed it back, the CW
> tone was down and I had to tune down one click to get it right
> again. Is this a result of the dropping battery voltage, as I
> presume it is?

I doubt it has to do with battery voltage. The BFO and 60MHz
oscillator run off of regulated 5V and 3.5V respectively. Assuming
that the other fellow wasn't also stepping down in frequency during
the QSO (given the amount of drift, this seems a real possibility),
I would suspect thermal drift of the BFO or the 60MHz oscillator.

> I have to get my head around this sidetone issue, because I want to
> be sending and receiving on the same frequency.

As long as the BFO trimmer is adjusted to produce a tone that matches
your sidetone, you will be zero-beat when any received signal's
tone matches your sidetone frequency. If you decide to use a
different BFO offset, say 400Hz, you won't be able to use the
sidetone as a reference tone unless you modify the code to produce
a 400Hz sidetone. Of course, you could always use an some
independent external reference tone.

> Is it the Li-Poly cells that are 3.7V per cell, giving 11.1V for 3
> cells?

Fully charged, the LiPo cells put out about 4.2V each.

Dave, WA3OFF

3046. Re: [AT_Sprint] Re: Centering the Beat note (was (unknown))

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-08 23:04:43 UTC
From: Michael Harnage
Topic: 3030 Message: 3046

I was thinking I needed to try to better clarify my
last message and I think Dave did a great job. Thanks
Dave!

Would like to emphasize that changing the last op amp
(C22/C23) will only change the best audio bandwidth
center freq. Your sidetone will still be 606Hz. From
my firmware you can choose the following discrete
sidetone values:

; 27 -> 606Hz default ATS3B
; 28 -> 585Hz default ATS2,3,3A
; 33 -> 496Hz close enuf to 500Hz
; 37 -> 442Hz for the musician's
; 41 -> 400Hz lowest we dare go606Hz default ATS3B
; 28 -> 585Hz default ATS2,3,3A
; 33 -> 496Hz close enuf to 500Hz
; 37 -> 442Hz for the musician's
; 41 -> 400Hz lowest we dare go?

If you change the sidetone via the firmware you should
also change the final op amp to handle it more
effectively. On my ATS3 I run 400Hz sidetone, because
I have changed the last op amp configuration to be a
low pass filter vice a bandpass filter. (More info at:
< http://w1mt.qrpradio.com/filter.html >) Note: that
the bandpass op amp mod is the only one that would be
applicable for the 3b if someone was so inclined.

-mike/w1mt

On my

_____
Be a better friend, newshound, and
know-it-all with Yahoo! Mobile. Try it now.
http://mobile.yahoo.com/;_ylt=Ahu06i62sR8HDtDypao8Wcj9tAcJ

3047. Re: Centering the Beat note (was (unknown))

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-09 04:05:04 UTC
From: radio_kx0r
Topic: 3030 Message: 3047

--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:

Mike,

Thanks for this information, and for your previous, very clear answer to my question. Dave did a nice job with his clear explanation of the alignment.

After a little reflection, I remembered that the ATS-3 BFO is a separate oscillator running in the second SA612. It has no direct connection to the DDS. The IF is the same for all bands. The fact that the LO is above or below the IF has no bearing on the BFO or the audio pitch - but it does affect whether the pitch goes up or down when we tune up and down. So I agree that setting the audio tone to 400 Hz or whatever has no affect on whether the transmitted and received RF are at the same frequency. That's a function of the alignment.

Since most of us match the sidetone to the received signal's pitch, and the ATS rigs do this at 606 Hz, we should consider using your firmware if we choose to use a different audio pitch in our rigs.

I'm curious if you improved the sound of the receiver with your changes. Going down in pitch is a personal thing - but it does enable the low-pass idea to work really well. I have an Idiom Press SCAF-1 filter, which is a very strong adjustable low-pass, and I like the way it works with some other rigs I have.

Thanks again to all of you!

72/73

Carey
KX0R

> I was thinking I needed to try to better clarify my
> last message and I think Dave did a great job. Thanks
> Dave!
>
> Would like to emphasize that changing the last op amp
> (C22/C23) will only change the best audio bandwidth
> center freq. Your sidetone will still be 606Hz. From
> my firmware you can choose the following discrete
> sidetone values:
>
> ; 27 -> 606Hz default ATS3B
> ; 28 -> 585Hz default ATS2,3,3A

> ; 33 -> 496Hz close enuf to 500Hz
> ; 37 -> 442Hz for the musician's
> ; 41 -> 400Hz lowest we dare go606Hz default ATS3B
> ; 28 -> 585Hz default ATS2,3,3A
> ; 33 -> 496Hz close enuf to 500Hz
> ; 37 -> 442Hz for the musician's
> ; 41 -> 400Hz lowest we dare go?
>
> If you change the sidetone via the firmware you should
> also change the final op amp to handle it more
> effectively. On my ATS3 I run 400Hz sidetone, because
> I have changed the last op amp configuration to be a
> low pass filter vice a bandpass filter. (More info at:
> < http://w1mt.qrpradio.com/filter.html >) Note: that
> the bandpass op amp mod is the only one that would be
> applicable for the 3b if someone was so inclined.
>
>
> -mike/w1mt
>
> On my
>
>
>
>

> Be a better friend, newshound, and
> know-it-all with Yahoo! Mobile. Try it now.
http://mobile.yahoo.com/;_ylt=Ahu06i62sR8HDtDypao8Wcj9tAcJ
>

3048. Re: Finally adjusted the band modules

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-09 04:26:06 UTC
From: radio_kx0r
Topic: 3030 Message: 3048

--- In AT_Sprint@yahoogroups.com, "Steven Pituch" <list2@...> wrote:

Steve,

I have one of the Norcal surface mount dummy loads, and I think it's a great product for QRP work. The detector circuit is good, people have checked it against calibrated instruments, and the impedance is very close to 50 ohms across the HF bands.

Your HB load looks cool - what is the resistor hidden under the epoxy???

Years ago I thought I'd make a dummy load, so I took a bunch of 2.2K carbon comp resistors and wired enough in parallel to read 50 ohms. Only later did I discover that the capacitance of those "non-inductive" resistors adds up when you have many in parallel, and such loads are reactive at HF and VHF because of the capacitance.

The Caddock resistors are very good at RF, and 50 ohm values are available in sizes like about 20W. These are in TO-220 and similar packages.

Metal oxide resistors (MO) are pretty good also, and very inexpensive. I use these in the Dan Tayloe LED SWR bridges in my BLT's, and they're just fine. Two 100 ohm 3W MO's in parallel is a good cheap 50 ohm load, if you keep the leads short.

I have some microwave loads with N connectors that I use for "standards". The MFJ-259B says they're perfect. I check other stuff with the MFJ-259B.

I ruined the calibration - probably fried the detector diodes - of the MFJ-259B because I connected it to an antenna. Yes, I connected my SWR analyzer to an antenna and it damaged it. Common mode signals from a moderate-sized wire antenna (inverted L) will damage an MFJ-259B. I was not transmitting. There is enough voltage on an antenna to ruin an analyzer - 60 Hz AC hum from HV power lines in the back yard, RF from a local AM BCST station, static charge from wind, rain, snow, and clouds, etc. Don't ruin your analyzer. The manual warns but not enough. Don't connect to a large antenna wired up for common mode !!!

I still think it's a great tool for checking out measurements and gear - but it's really delicate.

Enough for tonight - sorry to shift subjects, but it may save one of you from the humiliation I feel!

72/73

Carey
KX0R

> Yes, a good feature. I ordered one a couple of weeks ago from
Norcal, and
> hope to receive it in a few weeks. At $7.50 it seems to be a good
deal. I
> didn't want to wait so I built my own.
>
> I posted the schematic here:
> http://www.pituch.net/p/Steve's%20Page/Radio/ATS3b/ATS3b.htm
>
> Steve, W2MY
>
> ----- Original Message -----
> From: "Jim Miller" <jim@...>
> > the surface mount dummy load kit has a diode detector on it.
> >
> > 73
> >
> > jim ab3cv
> >
>

3049. Re: Finally adjusted the band modules

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-09 04:41:19 UTC
From: radio_kx0r
Topic: 3030 Message: 3049

In AT_Sprint@yahoogroups.com, "Steven Pituch" <list2@...> wrote:

Steve,

Your patience really paid off! These are NICE numbers all around.
Quit while you're ahead!! Nice work! Awesome.

Your diode idea is fine. A 1N4001, 4002, etc. will drop about .6
or .7 volts at 1A. Use 2 if you need 1.2 to 1.4V, etc.

Use a schottky diode like 1N5819 is you want .3V drop to fine-tune.

Good luck with your rig on the air. Usually it's a pleasant
surprise. With a good antenna the rig will surprise you and the
other guy across the country!

72/73

Carey
KX0R

>
> Hallelujah!
> I am so happy. I may have finished my ATS3b. Here are my numbers
for 12.00
> Volts:
> BAND Volts PWR Amps
> 80M 22.6 5.1 .634
> 40M 22.6 5.1 .668
> 30M 23.4 5.5 .745
> 20M 23.1 5.3 .741
> 17M 22.6 5.1 .753
> 15M 23.2 5.4 .728
>
> Some of you may recall that I had previously used a dummy load that
was 13%
> high and my OHR WM-1. This turned out to be a bad combination. I
was
> approaching 1 Amp just to get "5" Watts which was really closer to
7 Watts.
> Its a tribute to the design in that I didn't have a melt-down.
>
> I built a simple peak detector, and a precision dummy load. I put
them both
> in a plastic box with binding posts for the voltmeter and a bnc

jack to
> connect to the ATS3b. Once it was built it made taking accurate
power
> measurements very easy. Just square the DC voltage reading and
move the
> decimal point over two places: (V*V/(2*R). This tool is a keeper.
I wonder
> why Doug Hendricks hasn't made a kit of it.
>
> I need to post a schematic of the tool and some photos. It is in
Solid
> State Design on page 146, Figure 7. I will also post my
adjustments to each
> band modulw for reference for other builders.
>
> Thanks everyone on the list for the help. I was ready to give up
several
> times thinking that I had terminally damaged the kit while building
it.
> However, I had very few errors. It was actually a relatively easy
kit to
> build.
>
> I am looking foward to bringing the ATS3b, SLT tuner, and my
Jackite 31'
> pole to a picnic this Saturday and operating outdoors.
>
> Does anyone use dropping diodes to reduce the voltage from a gell
cell? I
> would think a 1 Amp diode with a .6 volt drop would be ideal.
>
> Steve, W2MY
>

3050. Re: [AT_Sprint] Re: Centering the Beat note (was (unknown))

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-09 04:51:23 UTC
From: Stephen Wandling
Topic: 3030 Message: 3050

Thanks to Michael, Dave and Carey for all of this good information. The pieces of the puzzle are beginning to fit into place. This is what I needed. I find it nearly impossible to run a "black box" system where I don't know why its doing what its doing when I do what I'm told to do to make it do what I want it to do.

Carey mentions the issue of "whether the pitch goes up or down when we tune up and down". To confirm, on 80M I had to tune Down to get the received tone to move higher in pitch. Is this correct?

The clipped signal during the BFO frequency adjustment still concerns me, but the receiver seems as 'hot' as my IC706 (my test equipment), so something is working.

On the topic of filters, I have the NEQRP Scaf filter which I love, or more correctly, my ears love. It is a bandpass configuration and can clamp down to about 65 Hz, which is where I tend to run it. I don't like hiss or lows. I also appreciate the crystal filter in the ATS3-B, which is something the IC706 is currently lacking.

Back to the Bee . . . . .

72,
Stephen
VE7NSD

radio_kx0r wrote:
>
> --- In AT_Sprint@yahoogroups.com <mailto:AT_Sprint%40yahoogroups.com>,
> Michael Harnage <w1mt@...> wrote:
>
> Mike,
>
> Thanks for this information, and for your previous, very clear answer
> to my question. Dave did a nice job with his clear explanation of
> the alignment.
>
> After a little reflection, I remembered that the ATS-3 BFO is a
> separate oscillator running in the second SA612. It has no direct
> connection to the DDS. The IF is the same for all bands. The fact
> that the LO is above or below the IF has no bearing on the BFO or the
> audio pitch - but it does affect whether the pitch goes up or down
> when we tune up and down. So I agree that setting the audio tone to
> 400 Hz or whatever has no affect on whether the transmitted and
> received RF are at the same frequency. That's a function of the
> alignment.

>
> Since most of us match the sidetone to the received signal's pitch,
> and the ATS rigs do this at 606 Hz, we should consider using your
> firmware if we choose to use a different audio pitch in our rigs.
>
> I'm curious if you improved the sound of the receiver with your
> changes. Going down in pitch is a personal thing - but it does
> enable the low-pass idea to work really well. I have an Idiom Press
> SCAF-1 filter, which is a very strong adjustable low-pass, and I like
> the way it works with some other rigs I have.
>
> Thanks again to all of you!
>
> 72/73
>
> Carey
> KX0R
>
> > I was thinking I needed to try to better clarify my
> > last message and I think Dave did a great job. Thanks
> > Dave!
> >
> > Would like to emphasize that changing the last op amp
> > (C22/C23) will only change the best audio bandwidth
> > center freq. Your sidetone will still be 606Hz. From
> > my firmware you can choose the following discrete
> > sidetone values:
> >
> > ; 27 -> 606Hz default ATS3B
> > ; 28 -> 585Hz default ATS2,3,3A
> > ; 33 -> 496Hz close enuf to 500Hz
> > ; 37 -> 442Hz for the musician's
> > ; 41 -> 400Hz lowest we dare go606Hz default ATS3B
> > ; 28 -> 585Hz default ATS2,3,3A
> > ; 33 -> 496Hz close enuf to 500Hz
> > ; 37 -> 442Hz for the musician's
> > ; 41 -> 400Hz lowest we dare go?
> >
> > If you change the sidetone via the firmware you should
> > also change the final op amp to handle it more
> > effectively. On my ATS3 I run 400Hz sidetone, because
> > I have changed the last op amp configuration to be a
> > low pass filter vice a bandpass filter. (More info at:
> > < http://w1mt.qrpradio.com/filter.html
> <http://w1mt.qrpradio.com/filter.html> >) Note: that
> > the bandpass op amp mod is the only one that would be
> > applicable for the 3b if someone was so inclined.
> >
> >
> > -mike/w1mt

> >
> > On my
> >
> >
> >
> >
> _____
> _____
> > Be a better friend, newshound, and
> > know-it-all with Yahoo! Mobile. Try it now.
> http://mobile.yahoo.com/;_ylt=Ahu06i62sR8HDtDypao8Wcj9tAcJ
> <http://mobile.yahoo.com/;_ylt=Ahu06i62sR8HDtDypao8Wcj9tAcJ>
> >
>
>

3051. Re: Centering the Beat note (was (unknown))

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-09 06:09:00 UTC
From: radio_kx0r
Topic: 3030 Message: 3051

--- In AT_Sprint@yahoogroups.com, Stephen Wandling <swandling@...>
wrote:

Stephen,

Yes, 80M is the band that is different. This is because the local
oscillator, the DDS that you tune with the buttons, is ABOVE the IF
(crystal filter frequency at about 4.91 Mhz).

Be sure to read Steve Weber's theory/circuit description in the
manual, and spend some time studying the schematic of the receiver.
The most difficult thing to see is how the two drawings connect
together and to the filter modules. It would be nice to have larger
functional drawings showing the whole thing in one view.

I also have a NESCAF, and it works well - I have used it with the
ATS3 rigs, but I think it's overkill. I think that my ATS3A and B
sound better as they are. They're narrow enough for me. The noise
level is pretty low also. In a quiet location, away from
development, you can appreciate the low noise of the ATS3 rigs.

Good night!

72/73

Carey
KX0R

>
> Thanks to Michael, Dave and Carey for all of this good
information. The
> pieces of the puzzle are beginning to fit into place. This is what
I
> needed. I find it nearly impossible to run a "black box" system
where I
> don't know why its doing what its doing when I do what I'm told to
do to
> make it do what I want it to do.
>
> Carey mentions the issue of "whether the pitch goes up or down when
we
> tune up and down". To confirm, on 80M I had to tune Down to get
the
> received tone to move higher in pitch. Is this correct?
>
> The clipped signal during the BFO frequency adjustment still
concerns

> me, but the receiver seems as 'hot' as my IC706 (my test
equipment), so
> something is working.
>
> On the topic of filters, I have the NEQRP Scaf filter which I love,
or
> more correctly, my ears love. It is a bandpass configuration and
can
> clamp down to about 65 Hz, which is where I tend to run it. I
don't
> like hiss or lows. I also appreciate the crystal filter in the
ATS3-B,
> which is something the IC706 is currently lacking.
>
> Back to the Bee . . . . .
>
> 72,
> Stephen
> VE7NSD

3052. Re: Finally adjusted the band modules

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-09 13:04:41 UTC
From: Steven Pituch
Topic: 3030 Message: 3052

Hi Carey and All,
I used 8 Radio Shack 100 Ohm resistors. I believe they are metal film. I also used four 1 Ohm 1/4 Watt resistors in parallel to add a little to it. With my two DVMs I am getting about 49.9 to 50.2 Ohms.

I just got the Norcal dummy load in the mail and it looks very nice. I would like to put two binding posts on a box for the DVM.

Also I noticed that it and the Elecraft dummy load only have one cap and one diode, where the design I used also has two caps and a 1000 Ohm resistor, I am not sure what the advantage is for the extra parts.

I had a 40 meter vertical loop in the trees once and on a windy day wanted to check continuity. I was surprised when I measured a considerable current across the end of the feedline.

Steve, W2MY

3053. NeSCAF filter power supply

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-10 14:27:49 UTC
From: kc7fys
Topic: 3053 Message: 3053

I hear a few of you fellas talking about the NESCAF filter project--I built one of my own last year. I ended up ripping it out of the heavy housing I had it in with a small speaker in favor of putting it into an Altoids tin. The problem--and I see another ham online has housed his in a similar tin--is the 9V or less that it gets fed. Do any of you run this filter on a single 9V battery? 11.5 or so is listed as nominal on the PDF of that kit. What have y'all done?
Jonathan KC7FYS

3054. Re: [AT_Sprint] NeSCAF filter power supply

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-10 15:30:39 UTC
From: WA0ITP
Topic: 3053 Message: 3054

Hi Johnathan,

I used a wall wart and 12 volt regulator, works fb.
http://www.wa0dx.org/wa0itp/nescaf.html

I love this radio stuff !
72, 73 Terry, WAØITP
www.wa0dx.org/wa0itp
www.4sqrp.com
www.hams4u.com

----- Original Message -----
From: kc7fys
To: AT_Sprint@yahoogroups.com
Sent: Saturday, May 10, 2008 9:27 AM
Subject: [AT_Sprint] NeSCAF filter power supply

I hear a few of you fellas talking about the NESCAF filter project--I
built one of my own last year. I ended up ripping it out of the heavy
housing I had it in with a small speaker in favor of putting it into
an Altoids tin. The problem--and I see another ham online has housed
his in a similar tin--is the 9V or less that it gets fed. Do any of
you run this filter on a single 9V battery? 11.5 or so is listed as
nominal on the PDF of that kit. What have y'all done?
Jonathan KC7FYS

No virus found in this incoming message.
Checked by AVG.
Version: 7.5.524 / Virus Database: 269.23.14/1425 - Release Date: 5/9/2008 12:38 PM

3055. Re: NeSCAF filter power supply

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-10 23:41:43 UTC
From: kc7fys
Topic: 3053 Message: 3055

Looks very nice. It's similar to how I had mine
<http://www.flickr.com/photos/jonathancharles/1353058476/> housed,
actually (but yours is a lot neater). I just wanted to make mine
trail-friendly, altoids-compliant, as it were. Will 9V be enough,
despite what the folks over at NE QRP club say?
Jonathan

--- In AT_Sprint@yahoogroups.com, "WA0ITP" <wa0itp@...> wrote:
>
> Hi Johnathan,
>
> I used a wall wart and 12 volt regulator, works fb.
> http://www.wa0dx.org/wa0itp/nescaf.html
--- In AT_Sprint@yahoogroups.com, "WA0ITP" <wa0itp@...> wrote:

3056. Adjusting the LO offset

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-12 18:10:21 UTC
From: Dave
Topic: 3030 Message: 3056

After thinking things through to make my previous post, I also realized that the way I was adjusting the offset was not quite right. I had not considered how steep the edges are on the crystal filter and had been looking for only a slight drop in the signal at TP2 as I stepped the frequency up and down. Having now realized that the edges of such a bandpass filter are usually specified at the 3dB-down points, I went back and readjusted, stepping down and up until the waveform's peak voltage was about 70% of that near center. At those points, the signal's amplitude changes significantly with each step. I found that I had originally set my ATS-3A about 50Hz low and the ATS-3B about 70Hz low.

After readjusting, both ended up within about 20Hz of 4.914800MHz (calculated from the DDS configuration values). The A's filter appears to be about 370Hz wide and the B's filter about 320Hz wide.

Dave, WA3OFF

3057. Drifting and Dreaming

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-13 03:26:06 UTC
From: Stephen Wandling
Topic: 3057 Message: 3057

I reported here that on my first QSO with the ATS3-B on 80M, each time the other guy came back, I had to hit the down button to raise the tone to a readable frequency. He was using separate boat anchors and might have been following me down, I don't know for sure, but we had a pretty long QSO.

Tonight was my second contact, on 40M. But, tonight the other guy made a long transmission and I had to hit the down button many times, (I kind of lost count) to keep the received tone the same. It just kept dropping every 10 or 15 seconds, But, this time, I used RIT, as I imagine I should have on the first contact. When he signed to me, I made a short transmission and then sent it back to dead air. He was gone. When I finally found him (up a couple of Khz), he was sending 73 and SK. I gave him a call but no response.

Something is obviously not right with the rig. I was on a 9V battery and the rig showed a voltage of 8V on startup, and about 7.7V when I lost him, so it shouldn't be a voltage problem. It's almost as if on the 80M contact the rig acted as though it was in RIT mode and tonight in RIT mod it acted like it was in 'regular' mode. (But I would have to contact the 80M guy to see if he noticed my frequency shifting or not.)

Definitely a mystery. I can't think of more to add right now, but if anyone has a question or an idea, I'm all ears.

72,
Stephen
VE7NSD

3058. Drifting and Dreaming - Addendum 1

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-13 04:55:03 UTC
From: Stephen Wandling
Topic: 3058 Message: 3058

After writing the report below, I was reading some emails with the Bee buzzing in the background. After a bit, I realized that the guy I was listening to had had about 4 QSOs with various people and there hadn't been a hint of shift in his frequency or theirs.

Curiouser and curiouser.

=*=*=*=*=*=*=*=*=*=*=*=*=*=*=*=*=*=*
I reported here that on my first QSO with the ATS3-B on 80M, each time the other guy came back, I had to hit the down button to raise the tone to a readable frequency. He was using separate boat anchors and might have been following me down, I don't know for sure, but we had a pretty long QSO.

Tonight was my second contact, on 40M. But, tonight the other guy made a long transmission and I had to hit the down button many times, (I kind of lost count) to keep the received tone the same. It just kept dropping every 10 or 15 seconds, But, this time, I used RIT, as I imagine I should have on the first contact. When he signed to me, I made a short transmission and then sent it back to dead air. He was gone. When I finally found him (up a couple of Khz), he was sending 73 and SK. I gave him a call but no response.

Something is obviously not right with the rig. I was on a 9V battery and the rig showed a voltage of 8V on startup, and about 7.7V when I lost him, so it shouldn't be a voltage problem. It's almost as if on the 80M contact the rig acted as though it was in RIT mode and tonight in RIT mod it acted like it was in 'regular' mode. (But I would have to contact the 80M guy to see if he noticed my frequency shifting or not.)

Definitely a mystery. I can't think of more to add right now, but if anyone has a question or an idea, I'm all ears.

72,
Stephen
VE7NSD

3059. Re: Drifting and Dreaming

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-13 05:43:13 UTC
From: radio_kx0r
Topic: 3057 Message: 3059

--- In AT_Sprint@yahoogroups.com, Stephen Wandling <swandling@...>
wrote:

Stephen,

This rig is controlled by the reference oscillator, a stable crystal-
controlled unit, and it runs off a voltage regulator in the rig.
Your battery shouldn't be a problem, but using a stable voltage is a
good idea for troubleshooting.

Stability in receive and transmit normally is about the same, since
the DDS is controlled by the same reference oscillator all the time.
Any thermal drift gets worse as the rig transmits and gets warm,
since the heating is much greater when transmitting.

On 80M these rigs are usually more stable than on the higher
frequencies, so your experience is not typical at all.

Two easy things to try:

1) Listen to a known stable signal. This could be another ham rig on
a dummy load - it should be a synthesized rig known to be stable, not
a VFO rig. Your signal could be a crystal calibrator or other
crystal oscillator, the kind most of us have had around for years.
It could be a synthesized signal generator, if you have one.
Whatever you use, warm it up for a long while so its reference
oscillator stabilizes. All these signal sources have some drift -
but if you minimize it, you can get a feel for the ATS rig's drift.
If you have a counter, warm it up too, and then measure the source to
make sure it's not drifting much.

If you have a VFO and a counter, or a VFO rig and a counter, you can
just measure that signal while keeping it peaked in the ATS's
receiver (match the sidetone).

2) Measure the frequency of your ATS rig's transmitted signal with a
counter (warmed up) while on dummy load. You'll need some kind of
attenuator to present the correct level to your counter input- be
cautious not to damage the counter. Use the minimum level that gives
a stable count. Don't hold the key down, unless you want to do a
harsh heat test - just key the rig every few minutes while it runs in
receive mode, and see if it moves much.

Try your tests on several bands if possible.

Also try to check your oscillator and counter, or sig gen, or
whatever your rely on, back to WWV's signal just to be sure your

gear's stable and any drift is minimal. Ideally you want something that stays within a few Hz of WWV for an hour or so. A low-power solid-state crystal oscillator, operating on regulated power, shielded, and at a stable temperature can do this if it's solidly built and warmed up.

You can use secondary standards to check against WWV and then to check your counter, or your rig's VFO, or whatever, so you have some control of imperfect equipment. I have an old TS-520S, and it has a crystal calibrator, which can be used as a secondary reference, to help deal with the drift of the VFO in the rig.

Even with no counter, I could warm up the TS-520 for an hour or two, set it to a convenient frequency that the ATS rig could hear, and also right on top of one of the TS-520's crystal calibrator points, such as 7025 KHz, 3550 Khz, 21050, or whatever. So I'd carefully match the TS-520's VFO to the calibrator, listen for the frequency with the ATS rig, measure and record the frequency with the ATS's readout; then repeat ALL the steps to make several measurements over a longer period of time, like 30 minutes, to measure the drift.

If you don't transmit, the ATS will stay cool, and unless something's wrong, I doubt you'll see much drift. Since I haven't noticed much of an issue on the air, I've never actually done a drift test on my own rig, but there are lots of ways to do it with whatever gear you have. Somewhere in the setup you'll need a stable oscillator that you have some confidence in.

If you have a known good counter, with its own frequency reference fully warmed up, checking your ATS rig is easy. Since so much of the rig is digital, almost everything points back to the reference oscillator if there's a problem. With a scope, probe, and counter you can check the reference oscillator. It's also very easy to check the DDS frequency at pin 20 - put the probe on R16 - this is the "B" signal, essentially an unused RF output of the AD9834. Some of us use this signal for the QBSA to measure. The QBSA is an external counter and frequency display.

Since my rig doesn't show much drift on my QBSA, I've never done more serious measurements. I have had QSO's where I had to chase the other guy with the RIT, but he was running old tube gear, or the ATS rig was sitting in the sun outside, or both.

The ATS rigs are much more stable than a lot of signal generators.

My ATS-3A can be tuned across some of the the band edges, and on that rig it's easy to go directly to WWV at 10.000000 Mhz and listen for any drift. It also transmits there, making it easy to use the rig as a transfer standard. Unfortunately it tunes in 50 Hz steps, or it could be used for really accurate transfers. My "B" won't go across the band edges...Steve fixed the code.

Another easy method for checking your rig is to schedule a QSO with another ham who has a relatively stable synthesized rig. Make sure he's warmed up and hopefully he has a TCXO reference and a high-class rig. After a half hour or so you should have a handle on any drift you may have.

The ATS rigs don't have a TCXO, and I'm sure there's some drift when running from a cold start, especially at sub-freezing temperatures. I've never been in a position to measure this drift when I've been out camping in the snow. Some day I'll do more formal measurements just for fun.

Wonder if other ops here with nice test gear have done any drift tests?

72/73

Carey
KX0R

> I reported here that on my first QSO with the ATS3-B on 80M, each time
> the other guy came back, I had to hit the down button to raise the tone
> to a readable frequency. He was using separate boat anchors and might
> have been following me down, I don't know for sure, but we had a pretty
> long QSO.
>
> Tonight was my second contact, on 40M. But, tonight the other guy made
> a long transmission and I had to hit the down button many times, (I kind
> of lost count) to keep the received tone the same. It just kept
> dropping every 10 or 15 seconds, But, this time, I used RIT, as I
> imagine I should have on the first contact. When he signed to me, I
> made a short transmission and then sent it back to dead air. He was
> gone. When I finally found him (up a couple of Khz), he was sending 73
> and SK. I gave him a call but no response.
>
> Something is obviously not right with the rig. I was on a 9V battery
> and the rig showed a voltage of 8V on startup, and about 7.7V when I
> lost him, so it shouldn't be a voltage problem. It's almost as if on
> the 80M contact the rig acted as though it was in RIT mode and

tonight
> in RIT mod it acted like it was in 'regular' mode. (But I would
have to
> contact the 80M guy to see if he noticed my frequency shifting or
not.)
>
> Definitely a mystery. I can't think of more to add right now, but
if
> anyone has a question or an idea, I'm all ears.
>
> 72,
> Stephen
> VE7NSD
>

3060. Re: [AT_Sprint] Drifting and Dreaming

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-13 10:31:12 UTC
From: Michael Harnage
Topic: 3057 Message: 3060

What kind of 9v battery? If it's the small rectangular
"transistor" battery then try something more
substantial and report on the results. These batteries
cannot supply the current necessary for transmit and
that may be the cause.

You might try measuring your voltage with key down
into a dummy load just to confirm.

--- Stephen Wandling <swandling@...> wrote:

> I was on a 9V battery
> and the rig showed a voltage of 8V on startup, and
> about 7.7V when I
> lost him, so it shouldn't be a voltage problem.

Be a better friend, newshound, and
know-it-all with Yahoo! Mobile. Try it now.
http://mobile.yahoo.com/;_ylt=Ahu06i62sR8HDtDypao8Wcj9tAcJ

3061. Re: [AT_Sprint] Drifting and Dreaming

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-13 21:56:18 UTC
From: Stephen Wandling
Topic: 3057 Message: 3061

Michael,

Yes, it is the small 9v battery. Its voltage drops about
1V on key down. The voltage across the dummy
load drops about 0.05V RMS during a 3 second key
down.

I've been given a monster (70 lb) commercial (Motorola)
rack mount 13.8V 25A power supply, with a 9.6V
regulated output as well. I will install this soon and this
should provide an appropriate supply voltage.

I have monitored the transmission frequency with my
IC706 and the ATS running into a dummy load. On
long keying sequences simulating a QSO, there was no
perceptible change in frequency.

As I noted in my addendum last night, I have listened to
other stations operating over a period of 1/2 hour and have
not noticed a change in pitch.

I will see how things are when I have better power.

72,
Stephen
VE7NSD

Michael Harnage wrote:
>
> What kind of 9v battery? If it's the small rectangular
> "transistor" battery then try something more
> substantial and report on the results. These batteries
> cannot supply the current necessary for transmit and
> that may be the cause.
>
> You might try measuring your voltage with key down
> into a dummy load just to confirm.
>
> --- Stephen Wandling <swandling@...
> <mailto:swandling%40gmail.com>> wrote:
>
> > I was on a 9V battery
> > and the rig showed a voltage of 8V on startup, and
> > about 7.7V when I
> > lost him, so it shouldn't be a voltage problem.
>
>

3062. Re: Drifting and Dreaming

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-13 23:53:31 UTC
From: w1mt
Topic: 3057 Message: 3062

The more I think about it I don't think a low 9v battery will do what you have described.

I think that the other end of your qso is chasing you then you are chasing them and so on. This will happen when move freq to match your sidetone and your offset is not equal to your sidetone. Rit is one solution, it might be worth rechecking calibration as well.

-mike/w1mt

--- In AT_Sprint@yahoogroups.com, Stephen Wandling <swandling@...> wrote:

>
> Yes, it is the small 9v battery.

3063. Re: [AT_Sprint] Re: Drifting and Dreaming

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-14 02:23:54 UTC
From: Stephen Wandling
Topic: 3057 Message: 3063

Mike,

In some tests today, with a fairly depleted 9V battery, I noted that on a 3-4 second key down, the supply voltage dropped below 6V. That made me think about the 'reset' that Steve inserted for when when the internal 3.5V voltage dropped a certain amount below 3.5V.

But, I perceive the shifting when I am listening, and all voltages appear to be fine then, even with a 7V supply voltage.

Chasing was my first guess, and it may be a correct one, as both stations I have contacted are boat anchor equipment. I contacted the first guy who replied "when you are using 50+ year old gear, drifting is a matter of interpretation". He went on to say that he usually retunes his receiver on each go around. He wasn't "aware" of any drifting on my part. The more recent contact has not yet answered my email.

That is the similarity between the two QSOs. The difference is that on the second one, I used RIT. On the first one I just hit the Down button when he started sending each time. Plus, on the second QSO. I had to hit the Down RIT button every 15-20 seconds or less during a 2 or 3 minute transmission.

Assuming the second guy stayed on frequency when we lost contact, I was 2-3 Khz down when I made my last transmission.

If #2's VFO was drifting, then my correcting with RIT should not have created any problem. Its almost like my RIT and what ever you call the non-RIT mode, are reversed.

I'm now running on a massive power supply at 9.95V 'regulated'. On key down the voltage drops to 9.64V. This gives me about 3W output. I haven't started the filter tweaking yet.

I guess I just have to make some contacts and see what happens.

Thanks for everyone's ideas and suggestions.

72,
Stephen
VE7NSD

Could it be that my RIT and my

w1mt wrote:
>
> The more I think about it I don't think a low 9v battery will do what
> you have described.
>
> I think that the other end of your qso is chasing you then you are
> chasing them and so on. This will happen when move freq to match your
> sidetone and your offset is not equal to your sidetone. Rit is one
> solution, it might be worth rechecking calibration as well.
>
> -mike/w1mt
>
> --- In AT_Sprint@yahoogroups.com <mailto:AT_Sprint%40yahoogroups.com>,
> Stephen Wandling <swandling@...> wrote:
>
> >
> > Yes, it is the small 9v battery.
>
>

3064. Re: Drifting and Dreaming

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-14 04:07:30 UTC
From: radio_kx0r
Topic: 3057 Message: 3064

--- In AT_Sprint@yahoogroups.com, Stephen Wandling <swandling@...>
wrote:

Stephen,

Congratulations on the larger power supply! Please read my recent
long post if you have the patience.

I agree with Mike that one station chasing another is a possibility.
Some operators don't know how to match another station's frequency,
or they just don't do it for other reasons. The result is a series
of corrections each go-round.

You can tell when RIT is operating in the "B" by the lit decimal
point on the display. You do need to be careful of whether RIT is on
or not, especially when you find one of those operators who keeps
coming back off frequency. I've screwed up because I thought RIT was
on and it wasn't!

Believe it or not, there are folks out there who actually zero beat
your signal when they call. They think they're supposed to do this.
In the QRP world, there are many ops running DC receivers (direct
conversion) who don't or can't come back right on frequency; and
there are quite a few with better QRP rigs that haven't been aligned
right, so there's an offset between their receive and transmit, only
they don't know, because they haven't checked it.

I think you can gain some confidence if you don't have drifting QSO's
with the guys running the more modern rigs, or if they stay put while
you monitor them. Tube gear does drift as it warms up, and some ops
don't warm it up enough before jumping on the band. Several KC of
drift is no problem for a tube oscillator coming up from cold.

For portable work get a battery rated at least 1000 maH. Lithium
rechargeables or NiMH are great. You won't be disappointed with 8 to
10 NiMH AA cells, although 10 cells is well over 13 volts with a
fresh charge - need a diode or two to drop that initially. 3 size
18650 Li ion cells, or 3 lithium polymer cells, will provide more
QSO's than you can handle. Even 8 AA alkaline cells will run the rig
nicely for countless hours.

I don't know where all this 9V smoke detector battery stuff got
started. Yes, the rig will run for a while in a sprint with a fresh
9V alkaline battery, if you keep the transmissions short, but what's
the point? That's not normal operation - that's a special event.
For pleasant, relaxed operation, at home or in the field, you need
stable power, with plenty of reserve for cold weather or whatever.

The ATS rigs allow you to provide that depth of power without
carrying much weight. My 3-cell Li ion 18650 pack, with over 2 AH at
about 11V, in a plastic box, with a series resistor for tuning, a
slide switch, a protection PCB, a polyswitch, and a connector weighs
7 ounces. An alkaline 9V battery weighs 2 oz. I know which one I
want on a serious radio hike or campout...

72/73

Carey
KX0R

> Mike,
>
> In some tests today, with a fairly depleted 9V battery, I noted that
> on a 3-4 second key down, the supply voltage dropped below 6V.
> That made me think about the 'reset' that Steve inserted for when
> when the internal 3.5V voltage dropped a certain amount below
> 3.5V.
>
> But, I perceive the shifting when I am listening, and all voltages
> appear to be fine then, even with a 7V supply voltage.
>
> Chasing was my first guess, and it may be a correct one, as both
> stations I have contacted are boat anchor equipment. I contacted
> the first guy who replied "when you are using 50+ year old gear,
> drifting is a matter of interpretation". He went on to say that he
> usually retunes his receiver on each go around. He wasn't "aware"
> of any drifting on my part. The more recent contact has not yet
> answered my email.
>
> That is the similarity between the two QSOs. The difference is
> that on the second one, I used RIT. On the first one I just hit the
> Down button when he started sending each time. Plus, on the
> second QSO. I had to hit the Down RIT button every 15-20
> seconds or less during a 2 or 3 minute transmission.
>
> Assuming the second guy stayed on frequency when we lost
> contact, I was 2-3 Khz down when I made my last transmission.
>
> If #2's VFO was drifting, then my correcting with RIT should
> not have created any problem. Its almost like my RIT and what
> ever you call the non-RIT mode, are reversed.
>
> I'm now running on a massive power supply at 9.95V
> 'regulated'. On key down the voltage drops to 9.64V.
> This gives me about 3W output. I haven't started the
> filter tweaking yet.
>
> I guess I just have to make some contacts and see what

> happens.
>
> Thanks for everyone's ideas and suggestions.
>
> 72,
> Stephen
> VE7NSD
>
>
>
> Could it be that my RIT and my
>
> w1mt wrote:
> >
> > The more I think about it I don't think a low 9v battery will do
what
> > you have described.
> >
> > I think that the other end of your qso is chasing you then you are
> > chasing them and so on. This will happen when move freq to match
your
> > sidetone and your offset is not equal to your sidetone. Rit is one
> > solution, it might be worth rechecking calibration as well.
> >
> > -mike/w1mt
> >
> > --- In AT_Sprint@yahoogroups.com <mailto:AT_Sprint%
40yahoogroups.com>,
> > Stephen Wandling <swandling@> wrote:
> >
> > >
> > > Yes, it is the small 9v battery.
> >
> >
>

3065. Re: [AT_Sprint] Re: Drifting and Dreaming

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-14 05:19:54 UTC
From: Stephen Wandling
Topic: 3057 Message: 3065

Carey,

Well it may well have been a case of chasing each other. I
just completed a long local qso with a guy I know who has
a digital rig. No drifting, shifting or other machinations were
observed.

But, it still bothers me that on the 40M event the other night,
I used RIT (the decimal was on) and yet I ended up way below
him when I came back. He still hasn't answered the email.
Maybe I got his email wrong off of QRZ.

Thanks for the battery info. I will be putting together a NiMH
pack until I can afford the LiPo. I've just rebuilt and modified
my BLT to it will cover 80M, and will be building a tuner for
an EFHW wire, probably for 20M. Both of these tuners (will)
have an absorption SWR circuit so the ATS will not strain
anything during tuning.

I can't work much 20M from this box canyon where I'm located,
so I am looking forward to some excursions up to the rim and
hearing how one of my favourite bands is doing!

Keep an ear open for me on the bands.

72,
Stephen
VE7NSD

radio_kx0r wrote:
>
> --- In AT_Sprint@yahoogroups.com <mailto:AT_Sprint%40yahoogroups.com>,
> Stephen Wandling <swandling@...>
> wrote:
>
> Stephen,
>
> Congratulations on the larger power supply! Please read my recent
> long post if you have the patience.
>
> I agree with Mike that one station chasing another is a possibility.
> Some operators don't know how to match another station's frequency,
> or they just don't do it for other reasons. The result is a series
> of corrections each go-round.
>
> You can tell when RIT is operating in the "B" by the lit decimal
> point on the display. You do need to be careful of whether RIT is on

> or not, especially when you find one of those operators who keeps
> coming back off frequency. I've screwed up because I thought RIT was
> on and it wasn't!
>
> Believe it or not, there are folks out there who actually zero beat
> your signal when they call. They think they're supposed to do this.
> In the QRP world, there are many ops running DC receivers (direct
> conversion) who don't or can't come back right on frequency; and
> there are quite a few with better QRP rigs that haven't been aligned
> right, so there's an offset between their receive and transmit, only
> they don't know, because they haven't checked it.
>
> I think you can gain some confidence if you don't have drifting QSO's
> with the guys running the more modern rigs, or if they stay put while
> you monitor them. Tube gear does drift as it warms up, and some ops
> don't warm it up enough before jumping on the band. Several KC of
> drift is no problem for a tube oscillator coming up from cold.
>
> For portable work get a battery rated at least 1000 maH. Lithium
> rechargeables or NiMH are great. You won't be disappointed with 8 to
> 10 NiMH AA cells, although 10 cells is well over 13 volts with a
> fresh charge - need a diode or two to drop that initially. 3 size
> 18650 Li ion cells, or 3 lithium polymer cells, will provide more
> QSO's than you can handle. Even 8 AA alkaline cells will run the rig
> nicely for countless hours.
>
> I don't know where all this 9V smoke detector battery stuff got
> started. Yes, the rig will run for a while in a sprint with a fresh
> 9V alkaline battery, if you keep the transmissions short, but what's
> the point? That's not normal operation - that's a special event.
> For pleasant, relaxed operation, at home or in the field, you need
> stable power, with plenty of reserve for cold weather or whatever.
> The ATS rigs allow you to provide that depth of power without
> carrying much weight. My 3-cell Li ion 18650 pack, with over 2 AH at
> about 11V, in a plastic box, with a series resistor for tuning, a
> slide switch, a protection PCB, a polyswitch, and a connector weighs
> 7 ounces. An alkaline 9V battery weighs 2 oz. I know which one I
> want on a serious radio hike or campout...
>
> 72/73
>
> Carey
> KX0R
>
> >
> > Mike,
> >
> > In some tests today, with a fairly depleted 9V battery, I noted that
> > on a 3-4 second key down, the supply voltage dropped below 6V.
> > That made me think about the 'reset' that Steve inserted for when

> > when the internal 3.5V voltage dropped a certain amount below
> > 3.5V.
> >
> > But, I perceive the shifting when I am listening, and all voltages
> > appear to be fine then, even with a 7V supply voltage.
> >
> > Chasing was my first guess, and it may be a correct one, as both
> > stations I have contacted are boat anchor equipment. I contacted
> > the first guy who replied "when you are using 50+ year old gear,
> > drifting is a matter of interpretation". He went on to say that he
> > usually retunes his receiver on each go around. He wasn't "aware"
> > of any drifting on my part. The more recent contact has not yet
> > answered my email.
> >
> > That is the similarity between the two QSOs. The difference is
> > that on the second one, I used RIT. On the first one I just hit the
> > Down button when he started sending each time. Plus, on the
> > second QSO. I had to hit the Down RIT button every 15-20
> > seconds or less during a 2 or 3 minute transmission.
> >
> > Assuming the second guy stayed on frequency when we lost
> > contact, I was 2-3 Khz down when I made my last transmission.
> >
> > If #2's VFO was drifting, then my correcting with RIT should
> > not have created any problem. Its almost like my RIT and what
> > ever you call the non-RIT mode, are reversed.
> >
> > I'm now running on a massive power supply at 9.95V
> > 'regulated'. On key down the voltage drops to 9.64V.
> > This gives me about 3W output. I haven't started the
> > filter tweaking yet.
> >
> > I guess I just have to make some contacts and see what
> > happens.
> >
> > Thanks for everyone's ideas and suggestions.
> >
> > 72,
> > Stephen
> > VE7NSD
> >
> >
> >
> > Could it be that my RIT and my
> >
> > w1mt wrote:
> > >
> > > The more I think about it I don't think a low 9v battery will do
> what
> > > you have described.

> > >
> > > I think that the other end of your qso is chasing you then you are
> > > chasing them and so on. This will happen when move freq to match
> your
> > > sidetone and your offset is not equal to your sidetone. Rit is one
> > > solution, it might be worth rechecking calibration as well.
> > >
> > > -mike/w1mt
> > >
> > > --- In AT_Sprint@yahoogroups.com
> <mailto:AT_Sprint%40yahoogroups.com> <mailto:AT_Sprint%
> 40yahoogroups.com>,
> > > Stephen Wandling <swandling@> wrote:
> > >
> > > >
> > > > Yes, it is the small 9v battery.
> > >
> > >
> > >
>
>

3066. Dead Receive with 12v??

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-14 10:15:17 UTC
From: Jim Fraser
Topic: 3066 Message: 3066

I had just completed putting my 3B into its enclosure and thought I would listen around a bit this evening. However to my surprise the receiver was dead, no hiss, no static, nothing. However, the transmitter works fine, and the sidetone and button audio responses work.

So, I went and checked the voltages in the receiver as per the table in the documentation and all measurements were in tolerance. I buzzed the connections from the band module. I was running from a battery pack of 8 AAs. I also tried running from my Jameco wall wart rated @ 12v, 1000ma with no luck. After studying the schematic for a bit I thought I would try hooking up my QBSA to the rig. It worked...what the #$%@!

The battery voltages reported by the 3B were 11.9v for the batery pack, 12.3v for the wall wart and 10.4v for the QBSA. Does anyone have any idea why the receiver mutes at 12v???

By the way the voltage chart for U5 Audio AGC is incorrect. It should be:

```
|------|
|5 1|
|4
|3
|------
```

3067. Dead Receive with 12v??

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-14 10:15:17 UTC
From: Jim Fraser
Topic: 3066 Message: 3067

I had just completed putting my 3B into its enclosure and thought I would listen around a bit this evening. However to my surprise the receiver was dead, no hiss, no static, nothing. However, the transmitter works fine, and the sidetone and button audio responses work.

So, I went and checked the voltages in the receiver as per the table in the documentation and all measurements were in tolerance. I buzzed the connections from the band module. I was running from a battery pack of 8 AAs. I also tried running from my Jameco wall wart rated @ 12v, 1000ma with no luck. After studying the schematic for a bit I thought I would try hooking up my QBSA to the rig. It worked...what the #$%@!

The battery voltages reported by the 3B were 11.9v for the batery pack, 12.3v for the wall wart and 10.4v for the QBSA. Does anyone have any idea why the receiver mutes at 12v???

By the way the voltage chart for U5 Audio AGC is incorrect. It should be:

```
|------|
|5 1|
|4
|3
|------
```

3068. Re: Dead Receive with 12v??

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-14 10:26:33 UTC
From: Jim Fraser
Topic: 3066 Message: 3068

Oops, sorry about that, double post and incomplete at that!

The pin out of U5 is...

```
|------|
|5 1|
|4 |
|3 2|
|------|
```

... and the voltages were:

1: 5.0
2: 0.0
3: 1.27
4: 0.0
5: 0.93

Jim K6JF

3069. Re: Dead Receive with 12v??

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-14 12:09:17 UTC
From: Steven Pituch
Topic: 3066 Message: 3069

HI Jim and All,
I may have a related problem with my new 3b. It seems at times when I am tuning the receive goes dead. It can happen when I am pressing the up or down keys or scanning with the W1MT firmware. The problem went away a few weeks ago, and I had been using a 12V regulated suppy at 12.0 Volts since. But on Sunday, I went to a picnic using a 2.3 Ah gel cell that was at 12.89 Volts. I had a 5 Ohm series resistor in-line for tuuning but may have forgotten to use it at some time. But the receiver started going deaf again at times. I never got the end fed wire to tune up so I packed it away.

Last night I hooked it up to the regulated supply. The receive was still intermittant. I reflashed the memory and it was still intermittant for a few minutes. It finally went back to normal after awhile. I did not transmit at all since then.

I wonder if less than perfect SWR can damage the firmware? Anyway this has been bugging me for a while. I tried resoldering all the joints and there was no change.

I am building a Fuch's tuner for 40, 20 and 15 meters using a 21 meter wire. When I finish it I will do more transmit tests and see if the receive goes away again. See:
http://www.qrpproject.de/Media/pdf/MultibandfuchsEnglish.pdf

Steve, W2MY

3070. ATS-3 rig durability, was: Dead Receive with 12v??

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-14 15:48:48 UTC
From: Vojtěch Bubník
Topic: 3066 Message: 3070

Hi Jim.

I actually had three problems with ATS-3a during its long life. And I have to admit I was not always gentle to it.

1) Burned finals. I am not sure whether it was caused by my tinkering with firmware or by high SWR. Anyway, -B shall be better with its final current probe.

2) One via connection was intermittent. It was a connection powering 5V stabilizer, so it was easy to trace. I soldered a wire powering the touch keyer on the stabilizer tab, maybe it put additional strain on the via.

3) One debouncing capacitor went dead. The chip SMD capacitors are quite sensitive to mechanical strain. The mechanical strain on the capacitor may be also caused by high temperature gradient during soldering. It is not visible that the capacitor is cracked.

I am a bit worried that problems 2) and 3) are caused by twisting of the thin circuit board. I would rather have the amateur construction on a standard 2mm thick PCB to make it more robust.

73, Vojtech OK1IAK

3071. Re: ATS-3 rig durability, was: Dead Receive with 12v??

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-14 17:00:31 UTC
From: Steven Pituch
Topic: 3066 Message: 3071

Vojtech,
How could you tell that a debouncing capacitor went dead? What was the rig doing?
Steve, W2MY

----- Original Message -----
From: "Vojtech Bubn?k" <bubnikv@...>
> 3) One debouncing capacitor went dead. The chip SMD capacitors are quite
> sensitive to mechanical strain. The mechanical strain on the capacitor may
> be also caused by high temperature gradient during soldering. It is not
> visible that the capacitor is cracked.

3072. Re: [AT_Sprint] Re: ATS-3 rig durability, was: Dead Receive with 12v??

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-14 17:44:31 UTC
From: Vojtěch Bubník
Topic: 3066 Message: 3072

> How could you tell that a debouncing capacitor went dead? What was the rig
> doing?

I have touch keyer chip (QT113) outputs connected to key input and up/down tuning buttons. The chip has a heart beat feature, it superposes short zero pulses on the steady high level signal. The heart beat pulses were filtered out reliably for a long time by on board debouncing capacitors.

I found out, because I have the touch electrodes connected to up/down tuning. With the hartbeat signal the tuning is extremely fast. When I added another capacitor in parallel, the hartbeat diappeard.

73, Vojtech OK1IAK

3073. Re: Dead Receive with 12v??

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-14 18:09:42 UTC
From: Jim Fraser
Topic: 3066 Message: 3073

I should also note that the rig is stock except for one mod, I added the 22K SMD resistor across C58 on the bottom of the board for the 'E' problem when cycling the power too fast. I also installed the capacitor for the LO output for the QSBA. It is tied to U7 Pin 20 (IOUTB), however this output was not connected to anything external at this point.

Jim K6JF

3074. Re: ATS-3 rig durability, was: Dead Receive with 12v??

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-14 20:04:55 UTC
From: Steven Pituch
Topic: 3066 Message: 3074

Ah yes, the QT113.
See the bottom of this page.
http://www.pituch.net/p/Steve's%20Page/Radio/SW40+/SW40+.html'

Regards,
Steve, W2MY

3075. Re: [AT_Sprint] Re: Dead Receive with 12v??

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-15 02:38:25 UTC
From: Stephen Wandling
Topic: 3066 Message: 3075

My question is: Why are people putting more than 12V into this rig
when it is my understanding that 12V is the maximum that it can
handle?

Is the 12V limit only a suggestion? Is it to avoid tripping the current
limit circuit during tune-up? Or to avoid toasting the finals?

While I find having problems with my rig to be stressful, in truth it
is probably the best way for me to get into understanding the circuit
and learning how the rig works.

Jim, its my understanding that you checked the voltages when the
receiver was 'dead'? And if that is the case, what was the voltage
on U6 pin 28?

72,
Stephen
VE7NSD

Steven Pituch wrote:
>
> HI Jim and All,
> I may have a related problem with my new 3b. It seems at times when I am
> tuning the receive goes dead. It can happen when I am pressing the up or
> down keys or scanning with the W1MT firmware. The problem went away a few
> weeks ago, and I had been using a 12V regulated suppy at 12.0 Volts
> since.
> But on Sunday, I went to a picnic using a 2.3 Ah gel cell that was at
> 12.89
> Volts. I had a 5 Ohm series resistor in-line for tuuning but may have
> forgotten to use it at some time. But the receiver started going deaf
> again
> at times. I never got the end fed wire to tune up so I packed it away.
>
> Last night I hooked it up to the regulated supply. The receive was still
> intermittant. I reflashed the memory and it was still intermittant for a
> few minutes. It finally went back to normal after awhile. I did not
> transmit at all since then.
>
> I wonder if less than perfect SWR can damage the firmware? Anyway this
> has
> been bugging me for a while. I tried resoldering all the joints and there
> was no change.
>
> I am building a Fuch's tuner for 40, 20 and 15 meters using a 21 meter
> wire.

> When I finish it I will do more transmit tests and see if the receive
> goes
> away again. See:
> http://www.qrpproject.de/Media/pdf/MultibandfuchsEnglish.pdf
> <http://www.qrpproject.de/Media/pdf/MultibandfuchsEnglish.pdf>
>
> Steve, W2MY
>
>

3076. Re: Dead Receive with 12v??

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-15 04:58:09 UTC
From: Jim Fraser
Topic: 3066 Message: 3076

Stephen:

U6 pin 28 is 3.47v, close enough to 3.5v. I don't think I ever ran with 12v before as I was using the QBSA to save the batteries. The QBSA tops out at around 10.7v or so. It was just my plan to use the 12v battery pack in the field.

Also I may have jumped the gun saying receive works running off the QBSA. It turns out I can hear white noise in the headphones, but on 40m I could not hear an S9 signal I was monitoring on the big rig. I did hear a weak signal on 20M on the 3B, but at a much lower level than on the big rig. Recheck the band modules? The TX seems to be OK putting out around 4w. I know 20M had worked before as I had a contest QSO into Iowa some time ago.

Oh well, it looks like the best thing to do is unsolder the connectors and remove the rig from the enclosure for debugging, sigh.

Jim K6JF

3077. Re: Dead Receive with 12v??

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-15 05:51:05 UTC
From: radio_kx0r
Topic: 3066 Message: 3077

--- In AT_Sprint@yahoogroups.com, Stephen Wandling <swandling@...>
wrote:

Stephen,

1) Steve Weber suggests no more than 12.0V power input. Most of us
trust his experience with the various ATS rigs.

2) Others have blown finals, usually when running more than 10V.

3) When I run my ATS rigs at 12V and 5W into a good 50 ohm load, key
down for a minute or so, the finals and driver get warm. On the
higher frequencies the output sags a few percent, a sign than either
the finals are increasing their Rds, or the driver is heating up, or
both.

4) I'm uncomfortable when I see that power sag. It doesn't inspire
confidence. It certainly warns that raising the voltage higher is a
bad idea; likewise, running the rig into a mismatch is unwise, since
that can sometimes cause the PA supply current to rise higher than
when running with a 50 ohm load.

5) The peak swing on the PA mosfets is large, even with a perfect
match and supply voltage less tha 12.0V. Pushing this higher makes
no sense.

6) The rig is a nice compromise between light weight, low supply
requirements, high efficiency, and reasonable output. Enjoy!

72,

Carey
KX0R

>
> My question is: Why are people putting more than 12V into this rig
> when it is my understanding that 12V is the maximum that it can
> handle?
>
> Is the 12V limit only a suggestion? Is it to avoid tripping the
current
> limit circuit during tune-up? Or to avoid toasting the finals?
>
> While I find having problems with my rig to be stressful, in truth
it
> is probably the best way for me to get into understanding the
circuit

> and learning how the rig works.
>
> Jim, its my understanding that you checked the voltages when the
> receiver was 'dead'? And if that is the case, what was the voltage
> on U6 pin 28?
>
> 72,
> Stephen
> VE7NSD

3079. Re: Dead Receive with 12v??

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-15 12:09:52 UTC
From: Steven Pituch
Topic: 3066 Message: 3079

Hi All,
My intent was not to encourage anyone to use more than 12.0 Volts into their rigs.

At say .7 Amps on tuneup the 5 Ohm resistor I use would drop the Voltage about 3.5 Volts to about (12.8V minus 3.5 V = 9.3 Volts). This is done in an effort to reduce problem of transmitting with a high SWR at full voltage while attempting to tune the rig.

For operating I have two sets of .33 Ohm resistors. At say .75 Amps operating at 1:1 SWR these would drop a supply about .5 Volt. This is meant to limit the voltage coming from a fully charged gel cell to around 12 Volts. The 2.3 AH gel cell I use is affordable ($16). I would rather have an 11.1 Volt lithium pack but for now I need to use the resistors.

Actually I have been using all three resistors during tune up. This should drop the supply voltage about 4 Volts.

Steve, W2MY

3080. Re: [AT_Sprint] Drifting and Dreaming

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-15 12:12:19 UTC
From: Full Some
Topic: 3057 Message: 3080

I experience about a 10 hz drift over 15 minutes from cold (67 deg F) start on 40 meters. My second psk qso was plagued with the adjusting the down button problem; my conclusion was that the severe portion of the problem was on the other end.

As rough indicator, one can use the Pocketdigi software to jump to CHU or WWV, start up digipan and click on the signal and then note any frequency change over a time period.

Stephen Wandling <swandling@...> wrote: I reported here that on my first QSO with the ATS3-B on 80M, each time
the other guy came back, I had to hit the down button to raise the tone to a readable frequency. He was using separate boat anchors and might have been following me down, I don't know for sure, but we had a pretty long QSO.

Tonight was my second contact, on 40M. But, tonight the other guy made a long transmission and I had to hit the down button many times, (I kind of lost count) to keep the received tone the same. It just kept dropping every 10 or 15 seconds, But, this time, I used RIT, as I imagine I should have on the first contact. When he signed to me, I made a short transmission and then sent it back to dead air. He was gone. When I finally found him (up a couple of Khz), he was sending 73 and SK. I gave him a call but no response.

Something is obviously not right with the rig. I was on a 9V battery and the rig showed a voltage of 8V on startup, and about 7.7V when I lost him, so it shouldn't be a voltage problem. It's almost as if on the 80M contact the rig acted as though it was in RIT mode and tonight in RIT mod it acted like it was in 'regular' mode. (But I would have to contact the 80M guy to see if he noticed my frequency shifting or not.)

Definitely a mystery. I can't think of more to add right now, but if anyone has a question or an idea, I'm all ears.

72,
Stephen
VE7NSD

3081. RE: [AT_Sprint] Re: Dead Receive with 12v??

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-15 12:39:02 UTC
From: Michael Harnage
Topic: 3066 Message: 3081

To all the guys getting a "dead" receiver:

Which firmware are you using? (Trying to determine if it is common to both Steve's and mine)

At time of incident: What is the voltage at pin7/U6 (3rd programming pin from the side of board)

What is the voltage at junction of R45/R46?

Thanks,
Mike

Steven Pituch wrote:
> Hi All,
> My intent was not to encourage anyone to use more than 12.0 Volts into their
> rigs.
> At say .7 Amps on tuneup the 5 Ohm resistor I use would drop the Voltage
> about 3.5 Volts to about (12.8V minus 3.5 V = 9.3 Volts). This is done in
> an effort to reduce problem of transmitting with a high SWR at full voltage
> while attempting to tune the rig.
> For operating I have two sets of .33 Ohm resistors. At say .75 Amps
> operating at 1:1 SWR these would drop a supply about .5 Volt. This is meant
> to limit the voltage coming from a fully charged gel cell to around 12
> Volts. The 2.3 AH gel cell I use is affordable ($16). I would rather have
> an 11.1 Volt lithium pack but for now I need to use the resistors.
> Actually I have been using all three resistors during tune up. This should
> drop the supply voltage about 4 Volts.
> Steve, W2MY
> ------------------------------------
> Yahoo! Groups Links
> Individual Email | Traditional
> http://docs.yahoo.com/info/terms/

3082. Re: [AT_Sprint] Re: Dead Receive with 12v??

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-15 17:29:58 UTC
From: Stephen Wandling
Topic: 3066 Message: 3082

Jim,

The reason I asked is that my first thought was that the Mute process was getting triggered. If your receiver seemed 'dead' and you have about 3.5v on U6 pin 28 then I guess its not the Mute. My next guess is that it involves the AGC circuit. Your reduced sensitivity seems to be consistent with an AGC problem, but it could be anything in the RF front end of the receiver. Maybe others can give you advice on how to proceed.

From the rest of your post, I am confused on your definition of a 'dead' receiver. If you start over with Steve's "

3083. Re: Dead Receive with 12v??

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-15 17:30:39 UTC
From: Jim Fraser
Topic: 3066 Message: 3083

I am using Steve's V3 firmware from the files section dated Oct 18, 2007.

Jim K6JF

3084. FS: ATS3 (not A or B)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-15 23:54:07 UTC
From: Rob May
Topic: 3084 Message: 3084

Need to raise a little cash to buy the new Portable Field Radio from qrpkits.com, so my ATS3 is for sale. The kit was started by someone else and I had to replace the DDS chip, so the soldering doesn't look as neat as it could be, but it works fine. The Altoids tin was done very quickly and doesn't look that great, I'll include a new tin (Hershey's Cacao Reserve) if you want to repackage it. It hears a 1 uV signal on all bands from my Norcal S9 Signal generator. Power with a 12V gel cell:
80M 5W 680mA
40M 5W 670mA
30M 4.5W 660mA
20M 4.5W 700mA
Photos here:
http://ph.groups.yahoo.com/group/AT_Sprint/photos/browse/f2f5
I think $160 is a fair price. Paypal preferred, but a postal money order is ok. I'll take a check if the shipping address matches your qrz.com address. Price includes shipping by USPS Priority Mail in the U.S. If I forgot anything, feel free to ask.
73,
Rob
NV5E

_____
Stay in touch when you're away with Windows Live Messenger.
http://www.windowslive.com/messenger/overview.html?ocid=TXT_TAGLM_WL_Refresh_messenger_052008

3085. Straight Key and DFE

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-16 22:58:39 UTC
From: Stephen Wandling
Topic: 3085 Message: 3085

I'm clear that DFE is not currently available when using the SK. My question is Why? From my simplistic perspective, a SK can send numbers just as well as a paddle. On deeper reflection (2 seconds later :-)) I suspect that reading whether the dot or dash input is triggered is easier than discerning a dot from a dash.

Ok, I've probably answered my first question now on to the second one. [Or as Edward de Bono says "That's the first right answer".]

Why can't we hot switch from paddles to SK and back? Maybe have to hold a button when removing/inserting?

DFE is such a sweet feature to have on a button tuned rig. But, I hang around a bit with the SKCC (Straight Key Century Club) gang and its pretty labourious QSYing from 7030 to 7058 with the buttons. (I keep meaning to time myself while I "count seconds" so I can 'jump' to a new frequency without stopping and checking where I am 6 times.) I hope this doesn't mean will have to learn . . . . patience! :-P

This question must have come up before, but I haven't found any discussion on it.

Did Vojtech ever get "Fast Up" running? It isn't implemented on my rig, so there must have been some reason it can't happen?

These are the rantings of a crazed mind on a smokin' hot day in the Deadman Creek valley.

72,
Stephen
VE7NSD

3086. RE: [AT_Sprint] Straight Key and DFE

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-17 02:54:19 UTC
From: Dale Putnam
Topic: 3085 Message: 3086

Gee, I was hoping to get past that very thing, by adding the freq counter that Steve has too...
add that to the AT, and qsy to my hearts concent... Have the counter built... just not mounted yet. --... ...--Dale - WC7S in Wy

To: AT_Sprint@yahoogroups.comFrom: swandling@...: Fri, 16 May 2008 15:58:39 -0700Subject: [AT_Sprint] Straight Key and DFE

I'm clear that DFE is not currently available when using the SK. My question is Why? From my simplistic perspective, a SK can send numbers just as well as a paddle. On deeper reflection (2 seconds later :-)) I suspect that reading whether the dot or dash input is triggered is easier than discerning a dot from a dash. Ok, I've probably answered my first question now on to the second one. [Or as Edward de Bono says "That's the first right answer".]Why can't we hot switch from paddles to SK and back? Maybe have to hold a button when removing/inserting?DFE is such a sweet feature to have on a button tuned rig. But, I hang around a bit with the SKCC (Straight Key Century Club) gang and its pretty labourious QSYing from 7030 to 7058 with the buttons. (I keep meaning to time myself while I "count seconds" so I can 'jump' to a new frequency without stopping and checking where I am 6 times.) I hope this doesn't mean will have to learn . . . . patience! :-PThis question must have come up before, but I haven't found any discussion on it. Did Vojtech ever get "Fast Up" running? It isn't implemented on my rig, so there must have been some reason it can't happen?These are the rantings of a crazed mind on a smokin' hot day in the Deadman Creek valley.72,StephenVE7NSD

_____
Change the world with e-mail. Join the i’m Initiative from Microsoft.
http://im.live.com/Messenger/IM/Join/Default.aspx?source=EML_WL_ChangeWorld

3087. Re: [AT_Sprint] Straight Key and DFE and other musings

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-17 03:05:08 UTC
From: Michael Harnage
Topic: 3085 Message: 3087

You're right, it's easier to read the dit or dah port rather than try to count lengths of dit's and dah's from a single input. Hence, DFE is only implemented for paddle mode.

It would, however, also be easy enough to add another menu option that would toggle from paddle to SK mode. Probably it hasn't been done before because it hasn't been something that Steve wanted nor I needed. Plus the pre 3b rigs had only 4k of program space so features were limited. The 3b uses an 8k ram mpu and is not being taxed yet. Contact me directly if you would want this and I'll try to help.

Steve's code is a reflection of what he wants in the rig and my firmware is a reflection of what I want in a rig. :) It appears that there is a unused port on the MPU and that brings up some interesting possibilities if one were inclined to make a hardware mod or two. Maybe even paddles and SK in the same package. Hmmmmm.

Right now I am working on improving the "iambicness" of the keying. Mode B in particular for high speed (40+) users. If anyone is a high speed Mode B keyer and can help me test let me know. Mode A folks as well. Does anyone use Ultimatic?

I am also thinking about adding a mode that will simply generate random sequences of characters (audio only, not transmitted).

Hope this wasn't too long a read.

-mike/w1mt

--- Stephen Wandling <swandling@...> wrote:

> Why can't we hot switch from paddles to SK and back?
> Maybe have to
> hold a button when removing/inserting?

3088. RE: [AT_Sprint] Straight Key and DFE and other musings

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-17 03:16:43 UTC
From: Dale Putnam
Topic: 3085 Message: 3088

Hi,
I've been known to speed up a bit, past 30 something.. would be happy to help test, have a 3, 3a and am working on the 3b now. It isn't ready to test yet.
Happy to help, would be a good test to try on the next Fox hunts.... or maybe during one of the contests...
Field Day is a bit early but maybe not... maybe I can have the 3b ready.
--... ...--Dale - WC7S in Wy

To: AT_Sprint@yahoogroups.comFrom: w1mt@...: Fri, 16 May 2008 20:05:08 -0700Subject: Re: [AT_Sprint] Straight Key and DFE and other musings

You're right, it's easier to read the dit or dah portrather than try to count lengths of dit's and dah'sfrom a single input. Hence, DFE is only implementedfor paddle mode.It would, however, also be easy enough to add anothermenu option that would toggle from paddle to SK mode.Probably it hasn't been done before because it hasn'tbeen something that Steve wanted nor I needed. Plusthe pre 3b rigs had only 4k of program space sofeatures were limited. The 3b uses an 8k ram mpu andis not being taxed yet. Contact me directly if youwould want this and I'll try to help.Steve's code is a reflection of what he wants in therig and my firmware is a reflection of what I want ina rig. :) It appears that there is a unused port onthe MPU and that brings up some interestingpossibilities if one were inclined to make a hardwaremod or two. Maybe even paddles and SK in the samepackage. Hmmmmm.Right now I am working on improving the "iambicness"of the keying. Mode B in particular for high speed(40+) users. If anyone is a high speed Mode B keyerand can help me test let me know. Mode A folks aswell. Does anyone use Ultimatic?I am also thinking about adding a mode that willsimply generate random sequences of characters (audioonly, not transmitted). Hope this wasn't too long a read.-mike/w1mt--- Stephen Wandling <swandling@...> wrote:> Why can't we hot switch from paddles to SK and back?> Maybe have to > hold a button when removing/inserting?

_____
E-mail for the greater good. Join the i’m Initiative from Microsoft.
http://im.live.com/Messenger/IM/Join/Default.aspx?source=EML_WL_ GreaterGood

3089. RFTB Sunday Night

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-18 03:29:07 UTC
From: Larry Makoski W2LJ
Topic: 3089 Message: 3089

This Sunday night is the night for May's Run For The Bacon.

If you're returning from Dayton; I hope you'll still have enough energy to join us!

As always, the details for this funfilled 2 hour QRP Sprint can be found at:

http://www.gentzow.com/fpqrp/fpqrprun.php

73 de Larry W2LJ
FP# 612

3090. Re: [AT_Sprint] Straight Key and DFE

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-18 21:13:06 UTC
From: Vojtěch Bubník
Topic: 3085 Message: 3090

> Did Vojtech ever get "Fast Up" running? It isn't implemented on my
> rig, so there must have been some reason it can't happen?

No. I had my ATS-3a flash memory full to the last bit. No space for extensions.
I received Steve's ATS-3b prototype, but did not have time to tinker with it yet.
Plenty of ideas, but so little time.

73, Vojtech OK1IAK / AB2ZA

3091. Run for the Bacon, 5/18/2008, 6:00 pm

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-19 00:41:41 UTC
From: AT_Sprint@yahoogroups.com
Topic: 3091 Message: 3091

Reminder from: AT_Sprint Yahoo! Group
http://groups.yahoo.com/group/AT_Sprint/cal

Run for the Bacon
Sunday May 18, 2008
6:00 pm - 8:00 pm
(This event repeats every month on the third Sunday.)
Location: Your shack or anywhere

Notes:
This Sunday evening, the Flying Pigs Amateur Radio Club International will be holding its monthly Run For The Bacon. This is a friendly, two hour QRP CW Sprint, which is open to ALL radio amateurs, will last from 9:00 - 11:00PM EDT (0200-0400 UTC Monday).

You may work stations once per band on 160, 80, 40, 20, 15 or 10 Meters. Suggested starting frequencies are 1.812, 3.562, 7.044, 14.062, 21.062, and 28.062 MHz.

The exchange is RST, S/P/C (State, Province, Country) and Flying Pigs membership number. If you're not a member of the Flying Pigs, and would like to be; then please cli

All Rights Reserved
Copyright ? 2008
Yahoo! Inc.
http://www.yahoo.com

Privacy Policy:
http://privacy.yahoo.com/privacy/us

Terms of Service:
http://docs.yahoo.com/info/terms/

3092. Hendricks "Portable Field Radio" -- Nice!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-19 13:26:05 UTC
From: Steve
Topic: 3092 Message: 3092

For KD1JV fans... this is a real nice, totally self contained field radio kit introduced this past weekend at the Dayton Hamvention.

http://www.qrpkits.com/pfr3.html

A KD1JV transceiver, integrated and packaged by Doug with an internal tuner, SWR indicator, display, battery power, case, and (optional) paddles. A single circuit board blends SMT and thru-hole parts. However, all the SMT parts are pre-mounted! (My guess from looking at the sample? About 15% SMT parts.)

This band-switched, 20/30/40M 5W rig is truly self contained. All you need to add is an antenna of your choosing!

Now... to find the time to put mine together!
73,
Steve
aa8af

3093. Altoids Longwire Tuner Diodes (Tayloe SWR indicator question)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-19 14:06:02 UTC
From: kc7fys
Topic: 3093 Message: 3093

Howdy,
I put together my own copy of the Altoids Longwire Tuner <http://www.qrpkits.com/altoidslongwire.html> , and think I may have done better than in past non-kit outings, but I may not have selected appropriate diodes. What type of LED is appropriate for this SWR indicator? The pdf for the SLT kit calls for a "Super Brite Clear LED (RED)." What specs should I be asking for for this LED? When I apply about 2.5watts RF to the input of this particular tuner, I get about 9.4V where the LED is wired in, but the LED doesn't light.
Also, the other diode in this Tayloe SWR bridge is a SD101C (in the kit version) and an IS953 that I installed (probably not the right diode, despite 'looking' the same [audience laughs]).
What should I be looking for for this application for these two <http://www.flickr.com/photos/jonathancharles/2504805817/> diodes?
Thanks,
Jonathan KC7FYS

3094. Re: [AT_Sprint] Altoids Longwire Tuner Diodes (Tayloe SWR indicator question)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-19 14:14:46 UTC
From: n0tu/Steve
Topic: 3093 Message: 3094

Nice job on the tuner Jonathan!!
2-questions where did you get your knob for the cap? and where did you get those nice SIP jumpers with 'user-friendly' handles. Sorry I don't have an answer about your diodes? I just hunted down some super bright LEDs and tried different ones till one worked. Donno what it's # is even? Cheers, Steve/n0tu

On Mon, May 19, 2008 at 3:06 PM, kc7fys <kc7fys@...> wrote:
> Howdy,
> I put together my own copy of the Altoids Longwire Tuner , and think I may
> have done better than in past non-kit outings, but I may not have selected
> appropriate diodes. What type of LED is appropriate for this SWR indicator?
> The pdf for the SLT kit calls for a "Super Brite Clear LED (RED)." What
> specs should I be asking for for this LED? When I apply about 2.5watts RF to
> the input of this particular tuner, I get about 9.4V where the LED is wired
> in, but the LED doesn't light.
> Also, the other diode in this Tayloe SWR bridge is a SD101C (in the kit
> version) and an IS953 that I installed (probably not the right diode,
> despite 'looking' the same [audience laughs]).
> What should I be looking for for this application for these two diodes?
> Thanks,
> Jonathan KC7FYS
>

3095. Re: Altoids Longwire Tuner Diodes (Tayloe SWR indicator question)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-19 14:39:40 UTC
From: kc7fys
Topic: 3093 Message: 3095

Ha ha, those jumpers are from Yodobashi Camera (I'm in JA) in the DOS/V computer section. That knob for the cap came with the cap for a buck in Akihabara.
I'll have to try a few diodes myself. The schottky, though, there's no substitute for that.
Jonathan

--- In AT_Sprint@yahoogroups.com, "n0tu/Steve" <n0tu.qrp@...> wrote:
>
> Nice job on the tuner Jonathan!!
> 2-questions where did you get your knob for the cap? and where did you
> get those nice SIP jumpers with 'user-friendly' handles. Sorry I don't
> have an answer about your diodes? I just hunted down some super bright
> LEDs and tried different ones till one worked. Donno what it's # is
> even? Cheers, Steve/n0tu

3096. Re: [AT_Sprint] Altoids Longwire Tuner Diodes (Tayloe SWR indicator question)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-19 18:18:52 UTC
From: Stephen Wandling
Topic: 3093 Message: 3096

Jonathan,

When I built my homebrew BLT, I had some LEDs lying around;
some had been removed from other gear. I went on Wikipedia to
see which side was the cathode. Following the information I got
there, I installed the LED and it did not light. Of course, it was in
backwards. So, that's going to be my guess.

Stephen
VE7NSD

kc7fys wrote:
>
> Howdy,
> I put together my own copy of the Altoids Longwire Tuner
> <http://www.qrpkits.com/altoidslongwire.html> , and think I may have
> done better than in past non-kit outings, but I may not have selected
> appropriate diodes. What type of LED is appropriate for this SWR
> indicator? The pdf for the SLT kit calls for a "Super Brite Clear LED
> (RED)." What specs should I be asking for for this LED? When I apply
> about 2.5watts RF to the input of this particular tuner, I get about
> 9.4V where the LED is wired in, but the LED doesn't light.
> Also, the other diode in this Tayloe SWR bridge is a SD101C (in the
> kit version) and an IS953 that I installed (probably not the right
> diode, despite 'looking' the same [audience laughs]).
> What should I be looking for for this application for these two
> <http://www.flickr.com/photos/jonathancharles/2504805817/> diodes?
> Thanks,
> Jonathan KC7FYS
>
>

3097. Re: Hendricks "Portable Field Radio" -- Nice!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-19 18:27:52 UTC
From: Jim Fraser
Topic: 3092 Message: 3097

It does look like a nice rig with everything needed for the three bands I would most likely use in the field. I am thinking about it, but I wish there were other color options! :)

Jim K6JF

--- In AT_Sprint@yahoogroups.com, Steve <lawresh@...> wrote:
>
> For KD1JV fans... this is a real nice, totally self contained field
> radio kit introduced this past weekend at the Dayton Hamvention.
>
> http://www.qrpkits.com/pfr3.html
>
> A KD1JV transceiver, integrated and packaged by Doug with an internal
> tuner, SWR indicator, display, battery power, case, and (optional)
> paddles. A single circuit board blends SMT and thru-hole parts.
> However, all the SMT parts are pre-mounted! (My guess from looking at
> the sample? About 15% SMT parts.)
>
> This band-switched, 20/30/40M 5W rig is truly self contained. All you
> need to add is an antenna of your choosing!
>
> Now... to find the time to put mine together!
> 73,
> Steve
> aa8af
>

3098. Re: Altoids Longwire Tuner Diodes (Tayloe SWR indicator question)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-19 18:46:20 UTC
From: Steven Pituch
Topic: 3093 Message: 3098

HI Jonathan,
The flat side of the led should be closest to ground.

I am guessing that any silcon or germanium diode should work if the power is around one watt. But you may need more power. The voltage drop of a silicon diode is about .6 V while the voltage drop of a Schotkey diode is a lot less allowing lower voltages to pass (I think)

The band on the diode should point away from the toroid and towards the resistor.

I am guessing also that if the led and diode polarity is not in the same direction there will be no current flow.

Good luck. Isn't this fun!
Steve, W2MY
----- Original Message -----
From: kc7fys
To: AT_Sprint@yahoogroups.com
Sent: Monday, May 19, 2008 9:06 AM
Subject: [AT_Sprint] Altoids Longwire Tuner Diodes (Tayloe SWR indicator question)

Howdy,
I put together my own copy of the Altoids Longwire Tuner , and think I may have done better than in past non-kit outings, but I may not have selected appropriate diodes. What type of LED is appropriate for this SWR indicator? The pdf for the SLT kit calls for a "Super Brite Clear LED (RED)." What specs should I be asking for for this LED? When I apply about 2.5watts RF to the input of this particular tuner, I get about 9.4V where the LED is wired in, but the LED doesn't light.
Also, the other diode in this Tayloe SWR bridge is a SD101C (in the kit version) and an IS953 that I installed (probably not the right diode, despite 'looking' the same [audience laughs]).
What should I be looking for for this application for these two diodes?
Thanks,
Jonathan KC7FYS

3099. Re: [AT_Sprint] Re: Hendricks "Portable Field Radio" -- Nice!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-19 18:50:46 UTC
From: Steve
Topic: 3092 Message: 3099

Yes, I wondered about the color, but there's no chance of leaving the
radio on some random rock in a remote location!

Steve
aa8af

Jim Fraser wrote:
> It does look like a nice rig with everything needed for the three
> bands I would most likely use in the field. I am thinking about it,
> but I wish there were other color options! :)

3100. Re: [AT_Sprint] Re: Hendricks "Portable Field Radio" -- Nice!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-19 19:06:08 UTC
From: Chuck Milam
Topic: 3092 Message: 3100

On Mon, May 19, 2008 at 1:50 PM, Steve <lawresh@...> wrote:
> Yes, I wondered about the color, but there's no chance of leaving the
> radio on some random rock in a remote location!

Exactly!

--
Chuck Milam
chuck@...
KF9FR@...

3101. Question about the Altoids Longwire Tuner

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-19 19:16:06 UTC
From: Hank Greeb
Topic: 3093 Message: 3101

What's the actual SWR when the LED goes out? i.e., what's the trade-off for getting to actual SWR=1 with a micro-ammeter to read reflected power/voltage vs the simplicity and light weight of a LED readout?
72/73 de n8xx Hg

3102. Re: [AT_Sprint] Question about the Altoids Longwire Tuner

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-19 21:49:25 UTC
From: Vojtěch Bubník
Topic: 3093 Message: 3102

Hi Hank.

I built one portable Z-match with this kind of LED SWR meter and it worked perfectly. One tunes to the minimum of the light emitted by the LED diode and the minimum is very sharp. So you do not know the SWR exactly, but you could be pretty sure, that you found the best minimum.

73, Vojtech OK1IAK

> ------------ Původní zpráva ------------
> Od: Hank Greeb <n8xx@...>
> Předmět: [AT_Sprint] Question about the Altoids Longwire Tuner
> Datum: 19.5.2008 21:33:00
> --
> What's the actual SWR when the LED goes out? i.e., what's the trade-off
> for getting to actual SWR=1 with a micro-ammeter to read reflected
> power/voltage vs the simplicity and light weight of a LED readout?
> 72/73 de n8xx Hg
>
>
>

3103. Re:Re: [AT_Sprint] Altoids Long wire Tuner Diodes (Tayloe SWR i ndicator question)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-19 22:36:31 UTC
From: J. Haynes
Topic: 3103 Message: 3103

Stephen,
As Murphy's Law would have it, my LED was cathode toward ground, which is backward.
Installing some pin sockets will facilitate this R&D process, I can see that.
Jonathan

3104. NAQCC Sprint Wednesday night!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-19 22:54:21 UTC
From: NAQCC
Topic: 2848 Message: 3104

NAQCC Sprint Wednesday night!
This coming Wednesday evening will be the monthly NAQCC Sprint for May, 2008.

I will refer you to the proper URL:

http://www.arm-tek.net/~yoel/sprint200805.html

There you will find all the details as to time, frequencies, this month's Special Award, which will be awarded to the one working the most different call areas in the USA.

This is a monthly event that caters to the CW veteran, the CW newcomer, straight key and bug fans. All are welcome to participate; but you must use QRP power levels to compete for awards.

Come join us and have a real good time!

73 de Dave VA3RJ
NAQCC #0004

3105. Re: [AT_Sprint] Altoids Longwire Tuner Diodes (Tayloe SWR indicator question)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-20 00:23:34 UTC
From: ehydra
Topic: 3103 Message: 3105

If it is for a varicap app, just use a 1N4007. It works really good.
Don't use others of the family 1N400x ! The 1N4007 has a pin structure.

regards -
Henry

J. Haynes schrieb:
> Stephen,
> As Murphy's Law would have it, my LED was cathode toward ground, which is backward.
> Installing some pin sockets will facilitate this R&D process, I can see that.
> Jonathan
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>
>

--
www.ehydra.dyndns.info

3106. RE: [AT_Sprint] Re: Hendricks "Portable Field Radio" -- Nice!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-20 02:30:56 UTC
From: Dale Putnam
Topic: 3092 Message: 3106

Well now, I, understand that the color presented is a bit on the bright side... but then, I don't have to see the radio much, but I do need to listen to it. I also know that there is a very happy porcupine, or mountain cat, maybe a deer, or a rabbit... a wolf or maybe the whole bunch of them... all gathered around a litte radio...that found its way to the top of a rock... way up the mountain.... in the Bridger-Teton Wilderness, and decided to stay... it hide out nicely... being about the same color.. Now, I am betting that they never got on the air with it... and if they did, they didn't use my call.... but just listen... for a moment... to the talk on the wide side... wow... what a Qso that would be.
Anyway, I figure that the little Yellow Wonder... will not try to hide out... it will be a nice addition to my saddle bag... or bedroll. Strapped on the back of the saddle, it will be a nifty addition.
C U from the Hills,
--... ...--Dale - WC7S in Wy

_____
Give to a good cause with every e-mail. Join the i’m Initiative from Microsoft.
http://im.live.com/Messenger/IM/Join/Default.aspx?souce=EML_WL_ GoodCause

3107. Re: Hendricks "Portable Field Radio" -- Nice!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-20 02:41:17 UTC
From: kc7fys
Topic: 3092 Message: 3107

--- In AT_Sprint@yahoogroups.com, Dale Putnam <daleputnam@...> wrote:
<snip>
Dale-san,
Not to get legalistic on you, but I am fairly certain porcupines are
not yet covered by the 'Small Game/Tiny Critters Clause 11.408b' in
the new FCC rulings on licensure for rodents. We are planning a candle
light vigil, but for now, porcupines are QRT.
Jonathan

3108. Re: [AT_Sprint] Altoids Longwire Tuner Diodes (Tayloe SWR indicator question)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-20 02:43:58 UTC
From: Stephen Wandling
Topic: 3103 Message: 3108

Jonathan

I'm of the opinion that the markings on LEDs is not yet pure science. Wikipedia says: "While the only definitive way to determine the polarity of the LED is to examine its datasheet, these methods are usually reliable:" They then go on to mention that the cathode is the shortest lead or the flat side is the cathode.

Regarding your circuit, the schematic shows the cathode of the LED going to ground, so if that's the way you had it then you had it right. As someone else here has said, the polarity of the LED and the diode have to be the same for the circuit to work. So, if your circuit works now, I suspect that if you (don't do this, I'm just making a point) reverse both the LED and the diode, it would still work exactly the same.

Some are confused by the arrow in a diode or LED, probably thinking that is the direction of current flow. Not too many years ago, we did think that 'current' flowed from the positive (surplus) side of a battery, through the circuit and then to the negative (deficiency) side of the battery. We now know that electrons flow from negative to positive; against the arrow.

While we're almost on the topic of what we think we know or what we know but don't talk about, I'd like to mention magnets. If you hang a science course bar magnet on a thread from its middle the end marked "N" will point north. Everyone knows that. But, if the north pole of a magnet points to the pole of another magnet, then they must be unlike poles. So, either all of the bar magnets are mis-marked or the poles of the planet earth are not named appropriately. I find it strange that this doesn't seem to come up in school or in the industry. I brought it up in 1961, regarding the polarity of a traveling wave tube focus magnet when I worked at Varian Associates and was laid off shortly thereafter. I gather I offended some engineers, who simply couldn't answer my question.

Thanks for bringing up this circuit. I had recently tacked together a tuner for an End Fed Half Wave antenna, from a circuit that Steve (The Goatman), N0TU pointed us towards: http://www.aa5tb.com/coupler.html Steve Yates, AA5TB, has done quite a bit of research into the subject; some of which I grasp and some I don't.

The AA5TB tuners are for resonant half wave antennas. I gather that the ALT/SLT tuners by Steve Weber are not for resonant antennas, but for a 51' wire and counterpoise. I find the idea of one tuner and one wire antenna to be very attractive for portable work. But, the ALT/SLT seems to fly in the face of what I am hearing from AA5TB.

Any antenna/tuner gurus out there that can sort this out?

72,
Stephen
VE7NSD

J. Haynes wrote:
> Stephen,
> As Murphy's Law would have it, my LED was cathode toward ground, which is backward.
> Installing some pin sockets will facilitate this R&D process, I can see that.
> Jonathan
>
>

3109. Re: Altoids Longwire Tuner Diodes (Tayloe SWR indicator question)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-20 05:45:39 UTC
From: radio_kx0r
Topic: 3103 Message: 3109

--- In AT_Sprint@yahoogroups.com, Stephen Wandling <swandling@...>
wrote:

Stephen and others,

I wrote a bunch of words here several month ago about my version of the ALT/SLT. The key point is to use a quality DIP switch to switch the inductor set. This proved to be a great idea in the field. Jumpers are a hassle, and switches are bulky. I use a Grayhill 8-bit DIP switch, and it works just fine. If you build this type of tuner, please consider this space-saving, convenient trick.

To find my earlier postings, search for Grayhill or DIP on this site.

My DLT tunes many combinations of end-fed wires and counterpoises on various bands. This January I used an 82-foot wire on 20, 30, 40, and 80M with the little tuner, a counterpoise of about 25 feet, and the ATS-B. I worked VP9 and KH6 with this wire, 20 feet up, on 40M, from a ski hut at 11,700 feet near Leadville, CO. I carried all the gear, about 3 lb total, up three miles in a backpack, wearing snowshoes, and somehow got the wire up while wallowing in deep snowdrifts. Does the tuner work? Awesomely!!!

Field tests and Eznec models reveal that short counterpoises, like 16 feet on 40M, work quite well with antenna lengths near 1/2 wave. A quarter wave counterpoise may be undesirable, as it tries to lower the feed impedance. You want a high impedance feed with an end-fed half wave, so you can get the current lobe up high, away from the ground.

The only problem with the high-Z feed at QRP levels is that it's subject to capacitance effects. You need to sit still once you get a good match. It's a minor hassle - not having to carry a feedline is a plus.

There is a photo of the tuner in the PHOTOS section here. My version not only has the DIP switch, but also additional jumpers allowing for several different configurations of the various components. I use two polyvaricons, which helps get matches faster.

If the LED goes out the match is very nice. I verified this with both BLT's and the DLT with an MFJ-259B. The Dan Tayloe circuit with the BLT is excellent. Doug Hendricks sells these null indicators as a sub-kit.

To get the polarity of the diode and LED correct, you only need to match the LED to the diode. The schottky diode can go either way.

If in doubt, test with a current-limited power supply, or a 9V battery with a 470-ohm resistor in series. For testing small LED's, limit current to 25 mA max. 10 to 20 mA is nice.

Most LED's have a bar-shaped "platform" part inside that holds the die. This looks like a minus sign and is usually negative. If in doubt, test the led and mark a lead with a marking pen to avoid reversal.

Use a schottky detector diode if you want good performance at QRP levels. A germanium diode also works well. A silicon diode will reduce the sensitivity, and you may not be able to get a nice bright led and good null with 1W or less unless you use the low-threshold diodes.

I think if you build an ALT with jumpers, you will go nuts using it, unless you use it with the same antenna and band setup all the time.

T match tuners could be built with DIP switches and toroids as well. I don't know whether the polyvaricons will handle the voltages in a T-match at 5W.

72

KX0R
Carey

> Jonathan
>
> I'm of the opinion that the markings on LEDs is not yet pure
science.
> Wikipedia says: "While the only definitive way to determine the
polarity
> of the LED is to examine its datasheet, these methods are usually
> reliable:" They then go on to mention that the cathode is the
shortest
> lead or the flat side is the cathode.
>
> Regarding your circuit, the schematic shows the cathode of the LED
going
> to ground, so if that's the way you had it then you had it right. As
> someone else here has said, the polarity of the LED and the diode
have
> to be the same for the circuit to work. So, if your circuit works
now, I
> suspect that if you (don't do this, I'm just making a point) reverse
> both the LED and the diode, it would still work exactly the same.
>
> Some are confused by the arrow in a diode or LED, probably thinking
that
> is the direction of current flow. Not too many years ago, we did
think

> that 'current' flowed from the positive (surplus) side of a battery,
> through the circuit and then to the negative (deficiency) side of
the
> battery. We now know that electrons flow from negative to positive;
> against the arrow.
>
> While we're almost on the topic of what we think we know or what we
know
> but don't talk about, I'd like to mention magnets. If you hang a
science
> course bar magnet on a thread from its middle the end marked "N"
will
> point north. Everyone knows that. But, if the north pole of a magnet
> points to the pole of another magnet, then they must be unlike
poles.
> So, either all of the bar magnets are mis-marked or the poles of the
> planet earth are not named appropriately. I find it strange that
this
> doesn't seem to come up in school or in the industry. I brought it
up in
> 1961, regarding the polarity of a traveling wave tube focus magnet
when
> I worked at Varian Associates and was laid off shortly thereafter. I
> gather I offended some engineers, who simply couldn't answer my
question.
>
> Thanks for bringing up this circuit. I had recently tacked together
a
> tuner for an End Fed Half Wave antenna, from a circuit that Steve
(The
> Goatman), N0TU pointed us towards: http://www.aa5tb.com/coupler.html
> Steve Yates, AA5TB, has done quite a bit of research into the
subject;
> some of which I grasp and some I don't.
>
> The AA5TB tuners are for resonant half wave antennas. I gather that
the
> ALT/SLT tuners by Steve Weber are not for resonant antennas, but
for a
> 51' wire and counterpoise. I find the idea of one tuner and one wire
> antenna to be very attractive for portable work. But, the ALT/SLT
seems
> to fly in the face of what I am hearing from AA5TB.
>
> Any antenna/tuner gurus out there that can sort this out?
>
> 72,
> Stephen
> VE7NSD
>

> J. Haynes wrote:
> > Stephen,
> > As Murphy's Law would have it, my LED was cathode toward ground, which is backward.
> > Installing some pin sockets will facilitate this R&D process, I can see that.
> > Jonathan
> >
> >
>

3110. Re: Altoids Longwire Tuner Diodes (Tayloe SWR indicator question)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-20 06:01:08 UTC
From: kc7fys
Topic: 3103 Message: 3110

Yes, I was mindful of your DIP setup that you were building back some months. The time and money invested will allow me to build both. At my level, this is primarily educational. Every time I mess something up or build it right, I learn something. I've been QRPing for just a couple years, so I've got lots of room to learn.
I'll check out your photos--and may ask you further clarifying questions, Carey,
Thanks,
Jonathan

--- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@...> wrote:
>
> --- In AT_Sprint@yahoogroups.com, Stephen Wandling <swandling@>
> wrote:
>
> Stephen and others,
>
> I wrote a bunch of words here several month ago about my version of
> the ALT/SLT. The key point is to use a quality DIP switch to switch
> the inductor set. This proved to be a great idea in the field.
> Jumpers are a hassle, and switches are bulky. I use a Grayhill 8-bit
> DIP switch, and it works just fine. If you build this type of tuner,
> please consider this space-saving, convenient trick.
>
> To find my earlier postings, search for Grayhill or DIP on this site.
>
> My DLT tunes many combinations of end-fed wires and counterpoises on
> various bands. This January I used an 82-foot wire on 20, 30, 40,
> and 80M with the little tuner, a counterpoise of about 25 feet, and
> the ATS-B. I worked VP9 and KH6 with this wire, 20 feet up, on 40M,
> from a ski hut at 11,700 feet near Leadville, CO. I carried all the
> gear, about 3 lb total, up three miles in a backpack, wearing
> snowshoes, and somehow got the wire up while wallowing in deep
> snowdrifts. Does the tuner work? Awesomely!!!
>
> Field tests and Eznec models reveal that short counterpoises, like 16
> feet on 40M, work quite well with antenna lengths near 1/2 wave. A
> quarter wave counterpoise may be undesirable, as it tries to lower
> the feed impedance. You want a high impedance feed with an end-fed
> half wave, so you can get the current lobe up high, away from the
> ground.
>
> The only problem with the high-Z feed at QRP levels is that it's
> subject to capacitance effects. You need to sit still once you get a
> good match. It's a minor hassle - not having to carry a feedline is

> a plus.
>
> There is a photo of the tuner in the PHOTOS section here. My version
> not only has the DIP switch, but also additional jumpers allowing for
> several different configurations of the various components. I use
> two polyvaricons, which helps get matches faster.
>
> If the LED goes out the match is very nice. I verified this with
> both BLT's and the DLT with an MFJ-259B. The Dan Tayloe circuit with
> the BLT is excellent. Doug Hendricks sells these null indicators as
> a sub-kit.
>
> To get the polarity of the diode and LED correct, you only need to
> match the LED to the diode. The schottky diode can go either way.
> If in doubt, test with a current-limited power supply, or a 9V
> battery with a 470-ohm resistor in series. For testing small LED's,
> limit current to 25 mA max. 10 to 20 mA is nice.
>
> Most LED's have a bar-shaped "platform" part inside that holds the
> die. This looks like a minus sign and is usually negative. If in
> doubt, test the led and mark a lead with a marking pen to avoid
> reversal.
>
> Use a schottky detector diode if you want good performance at QRP
> levels. A germanium diode also works well. A silicon diode will
> reduce the sensitivity, and you may not be able to get a nice bright
> led and good null with 1W or less unless you use the low-threshold
> diodes.
>
> I think if you build an ALT with jumpers, you will go nuts using it,
> unless you use it with the same antenna and band setup all the time.
>
> T match tuners could be built with DIP switches and toroids as well.
> I don't know whether the polyvaricons will handle the voltages in a T-
> match at 5W.
>
> 72
>
> KX0R
> Carey
>
>
>
> > Jonathan
> >
> > I'm of the opinion that the markings on LEDs is not yet pure
> science.
> > Wikipedia says: "While the only definitive way to determine the
> polarity
> > of the LED is to examine its datasheet, these methods are usually

> > reliable:" They then go on to mention that the cathode is the
> shortest
> > lead or the flat side is the cathode.
> >
> > Regarding your circuit, the schematic shows the cathode of the LED
> going
> > to ground, so if that's the way you had it then you had it right. As
> > someone else here has said, the polarity of the LED and the diode
> have
> > to be the same for the circuit to work. So, if your circuit works
> now, I
> > suspect that if you (don't do this, I'm just making a point) reverse
> > both the LED and the diode, it would still work exactly the same.
> >
> > Some are confused by the arrow in a diode or LED, probably thinking
> that
> > is the direction of current flow. Not too many years ago, we did
> think
> > that 'current' flowed from the positive (surplus) side of a battery,
> > through the circuit and then to the negative (deficiency) side of
> the
> > battery. We now know that electrons flow from negative to positive;
> > against the arrow.
> >
> > While we're almost on the topic of what we think we know or what we
> know
> > but don't talk about, I'd like to mention magnets. If you hang a
> science
> > course bar magnet on a thread from its middle the end marked "N"
> will
> > point north. Everyone knows that. But, if the north pole of a magnet
> > points to the pole of another magnet, then they must be unlike
> poles.
> > So, either all of the bar magnets are mis-marked or the poles of the
> > planet earth are not named appropriately. I find it strange that
> this
> > doesn't seem to come up in school or in the industry. I brought it
> up in
> > 1961, regarding the polarity of a traveling wave tube focus magnet
> when
> > I worked at Varian Associates and was laid off shortly thereafter. I
> > gather I offended some engineers, who simply couldn't answer my
> question.
> >
> > Thanks for bringing up this circuit. I had recently tacked together
> a
> > tuner for an End Fed Half Wave antenna, from a circuit that Steve
> (The
> > Goatman), N0TU pointed us towards: http://www.aa5tb.com/coupler.html
> > Steve Yates, AA5TB, has done quite a bit of research into the

> subject;
> > some of which I grasp and some I don't.
> >
> > The AA5TB tuners are for resonant half wave antennas. I gather that
> the
> > ALT/SLT tuners by Steve Weber are not for resonant antennas, but
> for a
> > 51' wire and counterpoise. I find the idea of one tuner and one wire
> > antenna to be very attractive for portable work. But, the ALT/SLT
> seems
> > to fly in the face of what I am hearing from AA5TB.
> >
> > Any antenna/tuner gurus out there that can sort this out?
> >
> > 72,
> > Stephen
> > VE7NSD
> >
> > J. Haynes wrote:
> > > Stephen,
> > > As Murphy's Law would have it, my LED was cathode toward ground,
> which is backward.
> > > Installing some pin sockets will facilitate this R&D process, I
> can see that.
> > > Jonathan
> > >
> > >
> >
>

3111. KX0R DIP ALT

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-20 06:31:40 UTC
From: kc7fys
Topic: 3103 Message: 3111

A couple comments on your design, which I might as well copy sometime down the line here.

First of all--sassy knobs! Did you fabricate them yourself? They serve the dual purpose of obvious functionality and allowing the PVCons to be seen.

I notice you wound your (is it called the 'detector'?) FT37-61 with interlaced secondary windings the first time--and separated them by quite a bit the second iteration--why's that?

So you don't have to chew your cabbage twice, I'll check back in the old posts--but what were the inductances of your seven toroids there?

I assume you left the SIP pins because they were a hassle to desolder--is that the case?

What I like about this unit, and especially if a male RCA plug terminates that input line, is that it really shrinks down my go-bag if I decide to leave all the partly-needed stuff behind. It eliminates a lot of connectors that I currently carry around. (I'm gonna one of these days snip all the BNCs out of my setup and go with RCAs finally.)

I'll do a search and read what I only half paid attention to the first time.
Regards,
Jonathan
PS. Your filter mods were such a hit with my setup that I'm eager to add the KX0R DIP ALT to my grab-and-go kit.

3112. Re: Hendricks "Portable Field Radio" -- Nice!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-20 11:53:21 UTC
From: dombaines
Topic: 3092 Message: 3112

--- In AT_Sprint@yahoogroups.com, Steve <lawresh@...> wrote:
>
> For KD1JV fans... this is a real nice, totally self contained field
> radio kit introduced this past weekend at the Dayton Hamvention.
>
> http://www.qrpkits.com/pfr3.html
>
[snip]...
>
> Now... to find the time to put mine together!
> 73,
> Steve
> aa8af

Steve et al,

You don't need much time to build it. For a bit of fun it took me just a little over 6 hours to build (30 minutes was winding the torroids) and I built mine whilst at FDIM, I collected the kit from Doug on the Thursday night and showed him the built kit Saturday night. His stall was across the way from the homebrew contest, and I put most of it together during the buildathon, Friday PM. I had boobed and put 22K values in R6 & R7 and not the 330K needed, silly mistake soon fixed, too much Sam Adams from the FDIM bar and not double checking values! The 4.7pF capacitor supplied in the kits at FDIM is a green 5pF capacitor not the 4.7pF NPO disk as listed on BOM. I discussed with Doug and team, they even had put in an extra cap 0.1uF and an additional 4K7 resistor so the kitting was fine.

The LED display you test in step 1 tests if you have a problem with the decimal point and the lowest of the 7 segment displays look at the 2 driver resistors on the right of the LED just below the 6 in a row. Mine were not soldered though enough as the 1/4 watt resistors body is just too long for the holes so I had to lift one end and resolder and make sure the solder came through hole. Any problem with other segments, trace which resistor in the bank is the driver and check the solder joint. The same segment in all four digits wil be effected.

Operationally I have noted that when you change band you have to change BOTH switches to switch in and out the 20m, 30m or 40m LPF. I suspect you will have to watch that.

One change I might suggest once I find the correct threads is to swap in thumb screws that will fit the case instead of the 4 tiny recessed screws as it is going to be a right pain fiddling with those screws

to change batteries in the field. Seem to be same as those you'll find on MFJ kit.

The yellow colour on mine top and bottom were slightly different but you have to look very closely to notice.

I will use a small case for mine, to include wire antenna and spare battery as the knobs and controls are all external and it might not fair too well knocked about in a ruck sack.

72

Dom
M1KTA

3113. Re: [AT_Sprint] Re: Hendricks "Portable Field Radio" -- Nice!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-20 14:55:06 UTC
From: john
Topic: 3092 Message: 3113

Wonder what it was that influenced Steve's product design?
:-)

John

3114. Re: [AT_Sprint] Straight Key and DFE

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-22 06:01:14 UTC
From: Stephen Wandling
Topic: 3085 Message: 3114

Vojtech,

That's good news to hear that "Fast Up" is still possible. For the paddle users, it may not be much of a bonus, but I spend lots of time using my straight key, and I sure would value it.

Thank you for all of your contributions to Steve's ATS rigs.

72,
Stephen
VE7NSD

Vojtěch Bubník wrote:
>
> > Did Vojtech ever get "Fast Up" running? It isn't implemented on my
> > rig, so there must have been some reason it can't happen?
>
> No. I had my ATS-3a flash memory full to the last bit. No space for
> extensions.
> I received Steve's ATS-3b prototype, but did not have time to tinker
> with it yet.
> Plenty of ideas, but so little time.
>
> 73, Vojtech OK1IAK / AB2ZA
>
> .
>
>

3115. Re: Straight Key and DFE

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-22 16:33:08 UTC
From: Jim Fraser
Topic: 3085 Message: 3115

I would also liked to have seen a different fast tune up or tune down function. I would like to be able to hold then release the Tune Up or Tune Down button and have the scan continue until either button is hit again, and have it loop around when reaching the band edge. This would be great for looking for activity.

Jim K6JF

--- In AT_Sprint@yahoogroups.com, Stephen Wandling <swandling@...>
wrote:
>
> Vojtech,
>
> That's good news to hear that "Fast Up" is still possible. For the
> paddle users, it may not be much of a bonus, but I spend lots of
> time using my straight key, and I sure would value it.
>
> Thank you for all of your contributions to Steve's ATS rigs.
>
> 72,
> Stephen
> VE7NSD
>
> VojtÄ□ch BubnÃk wrote:
> >
> > > Did Vojtech ever get "Fast Up" running? It isn't implemented on
my
> > > rig, so there must have been some reason it can't happen?
> >
> > No. I had my ATS-3a flash memory full to the last bit. No space
for
> > extensions.
> > I received Steve's ATS-3b prototype, but did not have time to
tinker
> > with it yet.
> > Plenty of ideas, but so little time.
> >
> > 73, Vojtech OK1IAK / AB2ZA
> >
> > .
> >
> >
>

3116. Re: Straight Key and DFE and other musings

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-22 19:07:41 UTC
From: Dave
Topic: 3085 Message: 3116

--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:
> Right now I am working on improving the "iambicness"
> of the keying. Mode B in particular for high speed
> (40+) users. If anyone is a high speed Mode B keyer
> and can help me test let me know. Mode A folks as
> well. Does anyone use Ultimatic?

I think much of the difficulty that I have with the keying in the ATS-3B (and I imagine it's the same in the others) is that the algorithm just isn't right. In both Steve's firmware and nit Mike's, which implements the same algorithm with code that's more compact, paddle inputs are completely ignored during the inter-element delay. This leaves a very tiny window of opportunity during the last 2/3 of a dit for the rig to see the dash paddle and queue the dah. There is a bit more of a window to queue a dit simply because the dah is three times as long as a dit.

If the firmware was modified to observe paddle inputs during the inter-element space, I believe the ATS's mode A would be equivalent to what most people term Iambic Mode B, where a momentary tap on the opposite paddle any time just after the beginning of the element to the end of the following inter-element space would queue the opposite element. I've modified mine to do this and keying is *much* easier.

As for the ATS's mode B, to me, this mode seems really bizarre. As implemented, it appears to queue a di-dah or dah-dit sequence if both paddles are observed to be closed at the trailing edge of an element. It seems to leave almost no margin for error; I can't see how one could consistently avoid getting an 'R' when intending to iambically send an 'A' unless the keying speed was set very, very low. One would probably have to key the 'A' non-iambically to make sure that only one paddle was down at a time.

To get what I believe is commonly referred to as Iambic mode A, which doesn't send the opposite element unless the opposite paddle is still closed when it comes time to send the next element, the firmware could be changed to simply toss the queued element unless it's paddle is still down. I have not tried this change since I intend to use Iambic mode B. Keying in a manner that is compatible with Iambic mode A will produce the same results with Iambic mode B as long as there are no unintentional momentary opposite-paddle closures that would be ignored with an Iambic-mode-A keyer.

If anyone knows of a (non-ATS) reference that describes a keyer that defines modes A and B the same as the ATS, please let me know. I would like to study it.

Dave, WA3OFF

3117. Re: Straight Key and DFE and other musings

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-23 00:10:57 UTC
From: radio_kx0r
Topic: 3085 Message: 3117

--- In AT_Sprint@yahoogroups.com, "Dave" <dmertz@...> wrote:

Dave,

Thanks for this post. I've wondered for some time why the ATS-3A and B keying seems harder to use than my CMOS-4, TICK, and K12 keyers. Normally I use Mode A, and I find it a bit harder to use the iambic characters with the ATS rigs. The rigs seem to make errors, or I seem to make errors, with the result that I often just send without the iambic motions. It ends up being more like single lever style.

I don't know enough about the code to comment, but there is a difference between the ATS mode A and the mode A on other keyers I have here. I'm not a sharp enough sender to put my finger on what the problem is. Usually I use my ATS rigs with Palm paddles, which are not the most precise or solid, so I've been blaming them for my errors. I think that imprecise timing in the code multiplies the problems caused by the paddles and the operator.

I hope some other ops will comment here on what they feel.

Perhaps there are enough of us Mode A people that someone will revise the code...wonder if it's the same on the new yellow box rig?

72
Carey
KX0R

> --- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@> wrote:
> > Right now I am working on improving the "iambicness"
> > of the keying. Mode B in particular for high speed
> > (40+) users. If anyone is a high speed Mode B keyer
> > and can help me test let me know. Mode A folks as
> > well. Does anyone use Ultimatic?
>
> I think much of the difficulty that I have with the keying in the
> ATS-3B (and I imagine it's the same in the others) is that the
> algorithm just isn't right. In both Steve's firmware and nit
Mike's,
> which implements the same algorithm with code that's more compact,
> paddle inputs are completely ignored during the inter-element delay.
> This leaves a very tiny window of opportunity during the last 2/3
> of a dit for the rig to see the dash paddle and queue the dah.
> There is a bit more of a window to queue a dit simply because the
> dah is three times as long as a dit.
>
> If the firmware was modified to observe paddle inputs during the

> inter-element space, I believe the ATS's mode A would be equivalent
> to what most people term Iambic Mode B, where a momentary tap on the
> opposite paddle any time just after the beginning of the element to
> the end of the following inter-element space would queue the
opposite
> element. I've modified mine to do this and keying is *much* easier.
>
> As for the ATS's mode B, to me, this mode seems really bizarre. As
> implemented, it appears to queue a di-dah or dah-dit sequence if
both
> paddles are observed to be closed at the trailing edge of an
element.
> It seems to leave almost no margin for error; I can't see how one
> could consistently avoid getting an 'R' when intending to iambically
> send an 'A' unless the keying speed was set very, very low. One
> would probably have to key the 'A' non-iambically to make sure that
> only one paddle was down at a time.
>
> To get what I believe is commonly referred to as Iambic mode A,
which
> doesn't send the opposite element unless the opposite paddle is
still
> closed when it comes time to send the next element, the firmware
> could be changed to simply toss the queued element unless it's
paddle
> is still down. I have not tried this change since I intend to
> use Iambic mode B. Keying in a manner that is compatible with
Iambic
> mode A will produce the same results with Iambic mode B as long as
> there are no unintentional momentary opposite-paddle closures that
> would be ignored with an Iambic-mode-A keyer.
>
> If anyone knows of a (non-ATS) reference that describes a keyer that
> defines modes A and B the same as the ATS, please let me know. I
> would like to study it.
>
> Dave, WA3OFF
>

3118. Re: [AT_Sprint] Re: Straight Key and DFE and other musings

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-23 02:36:30 UTC
From: Michael Harnage
Topic: 3085 Message: 3118
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

3119. Re: Straight Key and DFE and other musings

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-23 02:54:57 UTC
From: radio_kx0r
Topic: 3085 Message: 3119

--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:

Mike,

I think you tried an attachment, but they don't come through on this site.

I don't know a thing about firmware or how to load it. So little I'm scared to mess with it.

Please explain what the attachment was (is).

Thanks!

KX0R

> Try this on your 3b. Once enough folks confirm OK I
> will publish it and also fix my older ATS firmware
> versions.
>
> -mike/w1mt
>
> --- radio_kx0r <careyfuller@...> wrote:
>
> > --- In AT_Sprint@yahoogroups.com, "Dave"
> > <dmertz@> wrote:
> >
> > Dave,
> >
> > Thanks for this post. I've wondered for some time
> > why the ATS-3A and
> > B keying seems harder to use than my CMOS-4, TICK,
> > and K12 keyers.
> > Normally I use Mode A, and I find it a bit harder to
> > use the iambic
> > characters with the ATS rigs. The rigs seem to make
> > errors, or I
> > seem to make errors, with the result that I often
> > just send without
> > the iambic motions. It ends up being more like
> > single lever style.
> >
> > I don't know enough about the code to comment, but
> > there is a
> > difference between the ATS mode A and the mode A on
> > other keyers I
> > have here. I'm not a sharp enough sender to put my

> > finger on what
> > the problem is. Usually I use my ATS rigs with Palm
> > paddles, which
> > are not the most precise or solid, so I've been
> > blaming them for my
> > errors. I think that imprecise timing in the code
> > multiplies the
> > problems caused by the paddles and the operator.
> >
> > I hope some other ops will comment here on what they
> > feel.
> >
> > Perhaps there are enough of us Mode A people that
> > someone will revise
> > the code...wonder if it's the same on the new yellow
> > box rig?
> >
> > 72
> > Carey
> > KX0R
> >
> >
> > > --- In AT_Sprint@yahoogroups.com, Michael Harnage
> > <w1mt@> wrote:
> > > > Right now I am working on improving the
> > "iambicness"
> > > > of the keying. Mode B in particular for high
> > speed
> > > > (40+) users. If anyone is a high speed Mode B
> > keyer
> > > > and can help me test let me know. Mode A folks
> > as
> > > > well. Does anyone use Ultimatic?
> > > >
> > > I think much of the difficulty that I have with
> > the keying in the
> > > ATS-3B (and I imagine it's the same in the others)
> > is that the
> > > algorithm just isn't right. In both Steve's
> > firmware and nit
> > Mike's,
> > > which implements the same algorithm with code
> > that's more compact,
> > > paddle inputs are completely ignored during the
> > inter-element delay.
> > > This leaves a very tiny window of opportunity
> > during the last 2/3
> > > of a dit for the rig to see the dash paddle and
> > queue the dah.
> > > There is a bit more of a window to queue a dit

> > simply because the
> > > dah is three times as long as a dit.
> > >
> > > If the firmware was modified to observe paddle
> > inputs during the
> > > inter-element space, I believe the ATS's mode A
> > would be equivalent
> > > to what most people term Iambic Mode B, where a
> > momentary tap on the
> > > opposite paddle any time just after the beginning
> > of the element to
> > > the end of the following inter-element space would
> > queue the
> > opposite
> > > element. I've modified mine to do this and keying
> > is *much* easier.
> > >
> > > As for the ATS's mode B, to me, this mode seems
> > really bizarre. As
> > > implemented, it appears to queue a di-dah or
> > dah-dit sequence if
> > both
> > > paddles are observed to be closed at the trailing
> > edge of an
> > element.
> > > It seems to leave almost no margin for error; I
> > can't see how one
> > > could consistently avoid getting an 'R' when
> > intending to iambically
> > > send an 'A' unless the keying speed was set very,
> > very low. One
> > > would probably have to key the 'A' non-iambically
> > to make sure that
> > > only one paddle was down at a time.
> > >
> > > To get what I believe is commonly referred to as
> > Iambic mode A,
> > which
> > > doesn't send the opposite element unless the
> > opposite paddle is
> > still
> > > closed when it comes time to send the next
> > element, the firmware
> > > could be changed to simply toss the queued element
> > unless it's
> > paddle
> > > is still down. I have not tried this change since
> > I intend to
> > > use Iambic mode B. Keying in a manner that is
> > compatible with

> > Iambic
> > > mode A will produce the same results with Iambic
> > mode B as long as
> > > there are no unintentional momentary
> > opposite-paddle closures that
> > > would be ignored with an Iambic-mode-A keyer.
> > >
> > > If anyone knows of a (non-ATS) reference that
> > describes a keyer that
> > > defines modes A and B the same as the ATS, please
> > let me know. I
> > > would like to study it.
> > >
> > > Dave, WA3OFF
> > >
> >
> >
> >
> > ------------------------------------
> >
> > Yahoo! Groups Links
> >
> >
> >
> >
> >
>

3120. Re: Straight Key and DFE and other musings

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-23 04:20:29 UTC
From: Dave
Topic: 3085 Message: 3120

--- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@...>
> Please explain what the attachment was (is).

Mike attached his latest ATS-3B firmware that includes mods to the keying algorithm intended to produce the commonly expected operation for Iambic mode A and B. He included me directly on the distribution so I have the code and have made a few suggestions to Mike directly.

Once it's finalized, I think it will work nicely, but of course only if it's loaded into your 3B. Putting the same algorithm into Steve's code for the 3B would be a bit more work because of the way that support for paddle reversing was implemented. Mike's code does not include the digi-modes since he essentially added 3B support to his version of 3/3A code, but it gives you other very nice CW-related features.

Dave, WA3OFF

3121. Re: [AT_Sprint] Re: Straight Key and DFE and other musings

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-23 10:32:01 UTC
From: Michael Harnage
Topic: 3085 Message: 3121

Carey,

It was code. I forgot and sent it to the list. I will send it directly. (Anyone that wants to test it let me know).

Don't be afraid to reload firmware. It's easy and the instructions are on my website. You only need a few resistors and some cabling and a computer with a parallel port.

Make the cable according to:
< http://groups.yahoo.com/group/AT_Sprint/message/1869
>
< http://groups.yahoo.com/group/AT_Sprint/message/1884
>

It really is easy.

-mike

3122. Re:Re: [AT_Sprint] Re: Straight Key and DFE and other musings

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-24 01:09:24 UTC
From: J. Haynes
Topic: 3122 Message: 3122

As one of the list neophytes, I can attest to firmware updates being a snap.
Send it to my kc7fys at yahoo address when convenient.
Jonathan 7J1AWL

3123. Re: Dead Receive with 12v??

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-25 00:27:44 UTC
From: Jim Fraser
Topic: 3066 Message: 3123

I believe I have most of my receiver problems corrected. After I had originally peaked the receiver trimmers I went and did the kx0r mods to get a consistent power output on all bands. I did not think to re-do the receiver alignment at the time.

So I re-peaked the rx using Spectrogram and my N0SS broadband hf noise generator. I can now hear some signals though weak as the bands are not in great shape.

I still have a problem with 80m, I only get one peak on trimmer CT2 and no peaks on CT3. The peak noise level in Spectrogram is 30db lower than the other bands. I did not make any kx0r mods on this module as I was able to get 4w out with the QBSA's max 10.7v DC output voltage, my goal for all bands.

Has anyone else had this problem on their 80m module? Looks like I will have to try experimenting with component values to get good double peaks on the trimmers.

Jim K6JF

3124. Re: Dead Receive with 12v??

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-25 01:07:43 UTC
From: Steven Pituch
Topic: 3066 Message: 3124

It looks like I added 22 pF at C7F to double peak CT2.
http://www.pituch.net/p/Steve's%20Page/Radio/ATS3b/ATS3b.htm
Steve, W2mY

----- Original Message -----
From: "Jim Fraser" <jimf53@...>
>
> I still have a problem with 80m, I only get one peak on trimmer CT2 and
> no peaks on CT3.

3125. Re: [AT_Sprint] Re: Dead Receive with 12v??

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-25 02:18:44 UTC
From: Michael Harnage
Topic: 3066 Message: 3125

The recv front end is a double tuned tank circuit.

You may need to add C to the trimmers via C5F and C7F.
I made C5F 100pF and C7F 68pF.

-mike/w1mt

--- Jim Fraser <jimf53@...> wrote:

>
> I still have a problem with 80m, I only get one peak
> on trimmer CT2 and
> no peaks on CT3. The peak noise level in Spectrogram
> is 30db lower than
> the other bands. I did not make any kx0r mods on
> this module as I was
> able to get 4w out with the QBSA's max 10.7v DC
> output voltage, my goal
> for all bands.
>

3126. Re: Dead Receive with 12v??

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-25 04:51:17 UTC
From: radio_kx0r
Topic: 3066 Message: 3126

--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:

Jim,

Mike is right. The default values for the receive filter on 80M are set too high for tuning at 3.560 Mhz. Mike added capacitance. I went beyond that and changed the inductor from the molded 18 uH unit supplied to a toroid, measuring 22 uH. I also increased C5F and C7F.

Please see my details on the filter mods paper. I ended up with real nice receiver performance on 80M.

I started out with really weak sensitivity on 80M. I was maybe 40 db from where I should have been. After going down a lot of blind alleys, I found a tiny solder bridge across one of the pads for one of the receive filter inductors. I'd suggest you do a close inspection, with as bright a light as you can find, and serious magnification. Look at everything in the receive signal path. Look for cracked capacitors, solder bridges, and especially magnet wire where the enamel isn't stripped and soldered nicely. Follow the signal on the schematic, step-by-step, while you inspect each point on the filter board.

If you don't find a visual problem, you can inject a known signal into the receiver and trace it with a scope. Try it on 40M, since that band works OK; write down the levels as you follow the signal through. Then go to 80M and see where the signal drops or doesn't pass. You should not put too large a signal into your receiver, but you can inject enough to see something on an average scope. I have to admit I don't know what the damage level is for this receiver. Minus 20 dbm should be safe; 0 dbm might be OK; more is probably unwise. The scope probe will detune the circuits somewhat, but by comparing 40M and 80M you should be able to find a major problem in the module. 30 db down is a short, an open, or something else bad wrong.

Be patient enough to get the double peak so you can adjust for max. If there's a short or some other bad problem, you may not be able to find resonance until the fault is corrected. It's probably best to find the fault and then do the final tuning.

It's a good receiver. On 80M it will still hear many signals when the band's active, even with a shorted front end. Signals are strong on 80M. I had a nice QSO with someone on 80M before I found that solder bridge.

Good luck -

72

Carey
KX0R

> The recv front end is a double tuned tank circuit.
>
> You may need to add C to the trimmers via C5F and C7F.
> I made C5F 100pF and C7F 68pF.
>
> -mike/w1mt
>
> --- Jim Fraser <jimf53@...> wrote:
>
>
> >
> > I still have a problem with 80m, I only get one peak
> > on trimmer CT2 and
> > no peaks on CT3. The peak noise level in Spectrogram
> > is 30db lower than
> > the other bands. I did not make any kx0r mods on
> > this module as I was
> > able to get 4w out with the QBSA's max 10.7v DC
> > output voltage, my goal
> > for all bands.
> >
>

3127. Re: Dead Receive with 12v??

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-25 20:26:03 UTC
From: Jim Fraser
Topic: 3066 Message: 3127

Thanks for the feedback guys. I moved the 68pf capacitor in C5 over to C7 and placed a 100pf at C7. I now have double peaks on CT2 at a significantly higher level than before, but still less than the other bands.

However, I still get no peaks on CT3. I unsoldered and switched the trimmer caps at CT2 and CT3 just in case I had a bad one. But the result was the same, CT3 won't peak. Does anyone know the value of these trimmer caps??

I am now considering doing Carey's mod on this module. I don't have the capacitor values handy. And though I have the core and #30 wire, I'm not sure I want to wind another toroid, especially one with 75 turns! I think I will pick up a 22uH molded inductor instead. So I am on hold until Tuesday when I can get parts.

Thanks again for the help guys!

Jim K6JF

3128. Re:[AT_Sprint] Re: Dead Receive with 12v??

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-25 23:18:21 UTC
From: J. Haynes
Topic: 3128 Message: 3128

As the holy [QRP] book says, "He who windeth four score is well on the [signal] Path."
Winding toroids requires the Zen Approach, Grasshoppah. Take heart.
7J1AWL

3129. New W1MT firmware posted

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-26 02:28:58 UTC
From: w1mt
Topic: 3129 Message: 3129

For all you guys who have been checking out my firmware, I have just posted a couple of versions for the 3B on my website. They include a fix that I don't know how I missed originally but you will want it if you have a previous version 4 or version 5 of my firmware. The ones posted fix the reset code (which I had skipped over rather than do the 22k resistor mod) and a fix to the scanmode that I somehow missed before. Sorry for any inconvenience this may have caused. I won't be using version 4 or 5 again, I promise. Next will be version 6. Still looking for some users of the old Accukeyer to give some comments on the keying in version 5.

-mike/w1mt

3130. Re: Dead Receive with 12v??

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-26 04:04:39 UTC
From: radio_kx0r
Topic: 3066 Message: 3130

--- In AT_Sprint@yahoogroups.com, "Jim Fraser" <jimf53@...> wrote:

Jim,

Please verify that the connections on LF3 are correct. The leads from from the 6-turn link must go to P2 and ground. Otherwise the circuit won't tune.

Verify that the leads from the big winding go to ground and to CT3, C5F, and C9F.

If you have the double peak on CT2, you may not have to do anything to LF4. There's no need to wind another toroid, and maybe no need to change from 18uH to 22uH.

There's some fundamental problem if CT3 won't tune AND the sensitivity is low. It's a short, miswire, open, bad part, etc. 99% of these problems are solder problems, like shorts or no connection. Look really hard at those little magnet wires coming out of LF3. The solder connections should be nice, with solder visibly bonded to copper, and no tiny bridges on any of the pads. Trace and check every lead from LF3.

A meter won't help, since every connection of LF3 should read nearly zero ohms to ground.

Use a bright light, good magnification, and you'll find it. It's a 3D puzzle, but not a complicated circuit. When you get it fixed, 80M will be hot, with plenty of band noise, even if LF3 is not tuned quite right.

72

Carey
KX0R

> Thanks for the feedback guys. I moved the 68pf capacitor in C5 over to
> C7 and placed a 100pf at C7. I now have double peaks on CT2 at a
> significantly higher level than before, but still less than the other
> bands.
>
> However, I still get no peaks on CT3. I unsoldered and switched the
> trimmer caps at CT2 and CT3 just in case I had a bad one. But the
> result was the same, CT3 won't peak. Does anyone know the value of
> these trimmer caps??

>
> I am now considering doing Carey's mod on this module. I don't have
the
> capacitor values handy. And though I have the core and #30 wire,
I'm
> not sure I want to wind another toroid, especially one with 75
turns! I
> think I will pick up a 22uH molded inductor instead. So I am on
hold
> until Tuesday when I can get parts.
>
> Thanks again for the help guys!
>
> Jim K6JF
>

3131. Re: Dead Receive with 12v??

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-26 21:47:06 UTC
From: Jim Fraser
Topic: 3066 Message: 3131

Success! After examining the solder connections it did appear that maybe one or two points on LF3 may not be making good contact. The only way to be sure was to pull the transformer. I removed a slight bit more enamel on a couple ends that could be suspect and re-installed. The receiver now double peaks with both CT2 and CT3 and the output level matches the other bands.

Looks like I can finally call my 3B complete. All I have left to do is wire in the touch keyer module. I'm looking forward to Field Day when I can give this thing a good test.

Now on to other projects I have lined up, including a partially-completed SoftRock RXTX 40/30, time to wind some more toroids!

Thanks Mike and Carey for all your help.

Jim K6JF

3132. Re: [AT_Sprint] Re: Dead Receive with 12v??

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-27 01:25:23 UTC
From: Stephen Wandling
Topic: 3066 Message: 3132

Jim,

I too had low receive on 80M and no peak on CT3. It turned out
that I had switched two primary/secondary wires on LF3. I too
cried Success when I fixed that.

But, now I have learned that maybe I was only part way home. I
will be changing the two capacitors that Michael recommend. If
all goes well, I may apply for membership in the CT2/CT3
'double peak' club! :-)

My first portable ops with the Bee this weekend. The contest at
least let me know the bands were open. I was set up to work
80M-20M on an end fed wire, through the BLT, and I made Qs
on every band. It all worked great once I got the counterpoise
stuff sorted out. Thanks for your advice Carey.

72,
Stephen
VE7NSD

Jim Fraser wrote:
>
> Success! After examining the solder connections it did appear that
> maybe one or two points on LF3 may not be making good contact. The only
> way to be sure was to pull the transformer. I removed a slight bit more
> enamel on a couple ends that could be suspect and re-installed. The
> receiver now double peaks with both CT2 and CT3 and the output level
> matches the other bands.
>
> Looks like I can finally call my 3B complete. All I have left to do is
> wire in the touch keyer module. I'm looking forward to Field Day when I
> can give this thing a good test.
>
> Now on to other projects I have lined up, including a partially-
> completed SoftRock RXTX 40/30, time to wind some more toroids!
>
> Thanks Mike and Carey for all your help.
>
> Jim K6JF
>
>

3133. V5 up and running. Thx Mike

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-27 02:20:13 UTC
From: Jonathan
Topic: 3133 Message: 3133

Nice job on V5. Thank you. Buzzed it in this morning. Now I have to clean the house!
Jonathan

3134. Re: Dead Receive with 12v??

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-28 01:39:29 UTC
From: radio_kx0r
Topic: 3066 Message: 3134

--- In AT_Sprint@yahoogroups.com, "Jim Fraser" <jimf53@...> wrote:

Jim,

Nice to read your good news! I thought LF3 was the trickiest component in the kit. Several of us have had issues with it. The small magnet wire ought to be easy to solder, but it's not always so.

I recently found out that liquid solder flux helps when tinning or soldering magnet wire. The basic steps are: scratch the wire with an Xacto knife where you want to tin it, apply a drop of liquid flux, and tin the wire with your soldering iron and rosin core solder. Of course a solder pot helps, but most of us don't have one.

On some late winter nights, 80M is the best band on the ATS-3 rigs, since we're near solar minimum. 40M goes long, and many ops pull the switch, but there's still good activity on 80M. Because solar activity is so low, losses on 80M are lower at night than in more active years, so QRP works well. A big antenna helps, but you can have real QSO's, even with a 65 foot dipole up 35 feet, fed with ladder line and a tuner, on 80M. I would not have said this several years ago.

72

Carey
KX0R

> Success! After examining the solder connections it did appear that
> maybe one or two points on LF3 may not be making good contact. The
only
> way to be sure was to pull the transformer. I removed a slight bit
more
> enamel on a couple ends that could be suspect and re-installed. The
> receiver now double peaks with both CT2 and CT3 and the output
level
> matches the other bands.
>
> Looks like I can finally call my 3B complete. All I have left to do
is
> wire in the touch keyer module. I'm looking forward to Field Day
when I
> can give this thing a good test.
>
> Now on to other projects I have lined up, including a partially-
> completed SoftRock RXTX 40/30, time to wind some more toroids!
>

> Thanks Mike and Carey for all your help.
>
> Jim K6JF
>

3135. Re: New W1MT firmware posted

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-28 02:52:11 UTC
From: radio_kx0r
Topic: 3129 Message: 3135

--- In AT_Sprint@yahoogroups.com, "w1mt" <w1mt@...> wrote:

Mike,

I looked at your website and downloaded a file called ats3b_m005.s43. I believe that this is version 5, and you have already updated it to 6, I think.

In order to learn how to update the firmware, I'm going to reveal my lack of knowledge and ask questions that may seem unnecessary to people who're familiar with firmware and programming. Believe it or not, I have some knowledge of what is happening, but there are gaps that I can't bridge without asking several questions.

I've actually loaded firmware on boards, using equipment built by others, and I've been trained that processors can be damaged if things aren't done correctly. Connections must be correct, levels correct, and steps done in the right order. I don't see much room for creativity in the process.

I think what is needed is a step-by-step set of instructions for the novice. Please assume that most of us have little experience, and list all the steps required. That way any reasonably motivated person could actually succeed, instead of getting frustrated or possibly disabling his radio.

I can see several steps and many big gaps:

1) Download the firmware from your website
2) Save it somewhere on my computer where it can be found again
3) Get a program from TI?
4) Install it? Are there questions to answer during installation? Is special knowledge required to do the install?
5) It's not the latest version?
6) Open this program and follow your instructions
7) Then I have a big gap - it appears I need to purchase or acquire some kind of device from TI - it costs $49? I saw someting about I compiler and I freaked out.
8) But, it appears there may be a less expensive alternative, but I can't tell what's best for me, with little experience
9) Yet others suggest it's easier than that - I just need to make some kind of simple interface with resistors in each parallel line
10) I understand I need a parallel port on my computer
11) My machine has a DB25 connector for my printer - is this the port I need? I have never in my life used the parallel port on a computer for anything but a printer.
12) I have no idea which leads go where

13) I know nothing about the conventions, the voltage levels, or which signals are on which lines
14) I would need a drawing or wiring list to know what goes where, since I understand that each line carries data for a specific bit
15) I would like to read through the entire process in detail before beginning, in order to judge whether I want to start at all
16) I suspect that many others feel exactly the same way, but are reluctant to admit how little they understand about this process.
17) This is not just a thing where you hook up a USB cable, click a couple of steps on a menu, and you're done. I can do that. I can load maps onto my GPS, download my digital photos, etc.
18) I think anyone who built an ATS3-B successfully can probably load your firmware perfectly, but we need training and instructions. Most of us are not programmers, engineers, or digital people. Many of us stretched ourselves a little to build, debug, and perfect our ATS rigs.
19) I'm amazed that anyone - Steve, you, or anyone - could write all that code, unless they were compensated in some large manner. It's awesome. This actually makes it harder for me to figure out how to get and use your code!
20) I think that if you would write something like 30 to 50 lines of instructions, or more, the number of users of your code might increase significantly.
21) It doens't seem logical to write this much code and not have it used by many possible "customers"
21) I have to be both ignorant and blunt here to get past where I'm stuck - I need a program to follow in order to succeed
22) There are a lot of steps required to actually do this process right, first time, no errors, and I don't know the steps.
23) Am I missing something fundamental here, like, do these instructions already exist? Has some already written this up?
24) Most of us naturally might want to be able to return to Steve's code, some day perhaps, but likewise we have no idea how to do that, if we don't know how to load your code. We're blocked. Stalled.
25) Just because some bright, experienced people already know how to do this, or are smart enough to figure it out, doesn't mean that the rest of us can jump the gaps and figure out what to do.
26) It's hard to write clear instructions for others to follow, particularly when those others are not at your level, or when they lack experience.
27) I hope you'll help us out, because you've created something really significant for the ATS radios, and you want people to share this.
28) We really need a cookbook recipe with every single step and definition. We really are that clueless.
29) Some of us are willing to learn.

Thanks

72

Carey
KX0R

> For all you guys who have been checking out my firmware, I have just
> posted a couple of versions for the 3B on my website. They include a
> fix that I don't know how I missed originally but you will want it
if
> you have a previous version 4 or version 5 of my firmware. The ones
> posted fix the reset code (which I had skipped over rather than do
the
> 22k resistor mod) and a fix to the scanmode that I somehow missed
> before. Sorry for any inconvenience this may have caused. I won't be
> using version 4 or 5 again, I promise. Next will be version 6. Still
> looking for some users of the old Accukeyer to give some comments on
> the keying in version 5.
>
> -mike/w1mt
>

3136. Re: [AT_Sprint] Re: New W1MT firmware posted

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-28 03:48:46 UTC
From: Stephen Wandling
Topic: 3129 Message: 3136

Carey,

Thanks for this. While firmware is still a bit down the line for
me I did take a look at Mike's site and I definitely found that there
seemed to be assumptions/presumptions as to my knowledge
which left me feeling lost. Something that's step by step as you
suggest written in everyday language is needed before I subject
my Bee to this process.

radio_kx0r wrote:
>
> --- In AT_Sprint@yahoogroups.com <mailto:AT_Sprint%40yahoogroups.com>,
> "w1mt" <w1mt@...> wrote:
>
> Mike,
>
> I looked at your website and downloaded a file called
> ats3b_m005.s43. I believe that this is version 5, and you have
> already updated it to 6, I think.
>
> In order to learn how to update the firmware, I'm going to reveal my
> lack of knowledge and ask questions that may seem unnecessary to
> people who're familiar with firmware and programming. Believe it or
> not, I have some knowledge of what is happening, but there are gaps
> that I can't bridge without asking several questions.
>
> I've actually loaded firmware on boards, using equipment built by
> others, and I've been trained that processors can be damaged if
> things aren't done correctly. Connections must be correct, levels
> correct, and steps done in the right order. I don't see much room
> for creativity in the process.
>
> I think what is needed is a step-by-step set of instructions for the
> novice. Please assume that most of us have little experience, and
> list all the steps required. That way any reasonably motivated
> person could actually succeed, instead of getting frustrated or
> possibly disabling his radio.
>
> I can see several steps and many big gaps:
>
> 1) Download the firmware from your website
> 2) Save it somewhere on my computer where it can be found again
> 3) Get a program from TI?
> 4) Install it? Are there questions to answer during installation?
> Is special knowledge required to do the install?

> 5) It's not the latest version?
> 6) Open this program and follow your instructions
> 7) Then I have a big gap - it appears I need to purchase or acquire
> some kind of device from TI - it costs $49? I saw someting about I
> compiler and I freaked out.
> 8) But, it appears there may be a less expensive alternative, but I
> can't tell what's best for me, with little experience
> 9) Yet others suggest it's easier than that - I just need to make
> some kind of simple interface with resistors in each parallel line
> 10) I understand I need a parallel port on my computer
> 11) My machine has a DB25 connector for my printer - is this the port
> I need? I have never in my life used the parallel port on a computer
> for anything but a printer.
> 12) I have no idea which leads go where
> 13) I know nothing about the conventions, the voltage levels, or
> which signals are on which lines
> 14) I would need a drawing or wiring list to know what goes where,
> since I understand that each line carries data for a specific bit
> 15) I would like to read through the entire process in detail before
> beginning, in order to judge whether I want to start at all
> 16) I suspect that many others feel exactly the same way, but are
> reluctant to admit how little they understand about this process.
> 17) This is not just a thing where you hook up a USB cable, click a
> couple of steps on a menu, and you're done. I can do that. I can
> load maps onto my GPS, download my digital photos, etc.
> 18) I think anyone who built an ATS3-B successfully can probably load
> your firmware perfectly, but we need training and instructions. Most
> of us are not programmers, engineers, or digital people. Many of us
> stretched ourselves a little to build, debug, and perfect our ATS
> rigs.
> 19) I'm amazed that anyone - Steve, you, or anyone - could write all
> that code, unless they were compensated in some large manner. It's
> awesome. This actually makes it harder for me to figure out how to
> get and use your code!
> 20) I think that if you would write something like 30 to 50 lines of
> instructions, or more, the number of users of your code might
> increase significantly.
> 21) It doens't seem logical to write this much code and not have it
> used by many possible "customers"
> 21) I have to be both ignorant and blunt here to get past where I'm
> stuck - I need a program to follow in order to succeed
> 22) There are a lot of steps required to actually do this process
> right, first time, no errors, and I don't know the steps.
> 23) Am I missing something fundamental here, like, do these
> instructions already exist? Has some already written this up?
> 24) Most of us naturally might want to be able to return to Steve's
> code, some day perhaps, but likewise we have no idea how to do that,
> if we don't know how to load your code. We're blocked. Stalled.
> 25) Just because some bright, experienced people already know how to
> do this, or are smart enough to figure it out, doesn't mean that the

> rest of us can jump the gaps and figure out what to do.
> 26) It's hard to write clear instructions for others to follow,
> particularly when those others are not at your level, or when they
> lack experience.
> 27) I hope you'll help us out, because you've created something
> really significant for the ATS radios, and you want people to share
> this.
> 28) We really need a cookbook recipe with every single step and
> definition. We really are that clueless.
> 29) Some of us are willing to learn.
>
> Thanks
>
> 72
>
> Carey
> KX0R
>
>
>
>
> > For all you guys who have been checking out my firmware, I have just
> > posted a couple of versions for the 3B on my website. They include a
> > fix that I don't know how I missed originally but you will want it
> if
> > you have a previous version 4 or version 5 of my firmware. The ones
> > posted fix the reset code (which I had skipped over rather than do
> the
> > 22k resistor mod) and a fix to the scanmode that I somehow missed
> > before. Sorry for any inconvenience this may have caused. I won't be
> > using version 4 or 5 again, I promise. Next will be version 6. Still
> > looking for some users of the old Accukeyer to give some comments on
> > the keying in version 5.
> >
> > -mike/w1mt
> >
>
>

3137. Re: [AT_Sprint] Re: New W1MT firmware posted

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-28 10:35:43 UTC
From: Michael Harnage
Topic: 3129 Message: 3137

V5 is my latest. V6 will be the next one (not published yet.)

There is a step by step procedure at my website, it's at:

< http://w1mt.qrpradio.com/IAR_setup.txt >

Keep in mind that it was written when the ATS-3 came out so you will have to put MSP430F1232 vice MSP430F1121A but everything else is the same.

If you use the IAR suite that I have on my website you can follow it exactly. If you use the latest IAR suite from TI then you will have to change a few things. I still use the older IAR suite.

As far as messing up your rig, I have yet to see it happen. I don't think you can mess it up.

Hope this helps. Let me know if that procedure link above leaves any more questions...

-mike/w1mt

--- radio_kx0r <careyfuller@...> wrote:

> --- In AT_Sprint@yahoogroups.com, "w1mt" <w1mt@...>
> wrote:
>
> I believe that this is version 5,
> and you have
> already updated it to 6, I think.
>
>
>
> I think what is needed is a step-by-step set of
> instructions for the
> novice.

3138. Cable for programming the ATS rigs

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-28 11:11:04 UTC
From: Michael Harnage
Topic: 3138 Message: 3138

This is originally from Steve. I have changed the
resistors according to Steve's subsequent testing.

All you need is a male DB-25 connector for the
parallel port, a 7 pin SIP pin to plug into the ATS
board, and 6, 220 ohm resistors.

We'll number the pins on the ATS board left to right
as 1 to 7, ground
being pin 1.

ATS pin >> resistor >> DB25 pin
1 none 18 to 25 (all grounds connected together)
2 220 16
3 220 1
4 220 4
5 220 3
6 220 2
7 220 ohm 12

The resistors do a voltage translation from the 4-5
volt output of the parallel port to the 3.5 volt
supply of the MPU. The resistor values aren't very
critical, a size up or down from those shown should
work okay.

3139. ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-28 16:22:32 UTC
From: hb9tso
Topic: 3139 Message: 3139

Hello Forum Members

I built my ATS3b, and i have same troubles:

1. When the rig is to pwr connected i hear only constant very high tone in the earphones.

2. From time to time when i connect pwr to the rig i get the high current indication, but ther is noc high current situation.

As info: if i press the key i have approx. 2.5watts output and the high tone is not any more present.

TKS how replay to.

Nice regards Rolf

3140. Re: ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-28 20:14:16 UTC
From: Dave
Topic: 3139 Message: 3140

> 2. From time to time when i connect pwr to the rig i get the high
> current indication, but ther is noc high current situation.

Steve's recommendation for eliminating the "E" at power-up:
http://groups.yahoo.com/group/AT_Sprint/message/1585

> As info: if i press the key i have approx. 2.5watts output and the
> high tone is not any more present.

That suggests that the problem is in the receive circuit. Is the
2.5W signal on the correct frequency? Does the rig indicate the
frequency in Morse code and on the LED correctly? If you get a
good indication on the LED but not by Morse code, and the Tx output
is on the correct frequency, the problem is probably in the audio
section near U4 or U3b.

Dave, WA3OFF

3141. Re: [AT_Sprint] ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-29 03:14:07 UTC
From: Stephen Wandling
Topic: 3139 Message: 3141

Rolf,

- Were you successful in all of the "Check out and Calibration" steps on pages 23 and 24?

- Is the 'very high tone" referring to its frequency or its volume?

- Have you checked all of the voltages on page 27?
Do not despair, your Bee will "sing".

72,
Stephen
VE7NSD

hb9tso wrote:

Hello Forum Members

I built my ATS3b, and i have same troubles:

1. When the rig is to pwr connected i hear only constant very high
tone in the earphones.

2. From time to time when i connect pwr to the rig i get the high
current indication, but ther is noc high current situation.

As info: if i press the key i have approx. 2.5watts output and the
high tone is not any more present.

TKS how replay to.

Nice regards Rolf

3142. WANTED - QRP Base Station Accessory (QBSA) by Steven Weber, KD1JV

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-29 14:21:56 UTC
From: mpupeza
Topic: 3142 Message: 3142

Hi;
I'd like to buy a QRP Base Station Accessory (QBSA) by Steven Weber,
KD1JV, in either kit form or assembled.
I can pay via PayPal, Check $US, Cheque $CDN, or other.
This is to complement my marvelous ATS-3B!
Let me know what you have.
Thanks,
72, 73
Mike VE3EQP .....>
VE3EQP@...

3143. Firmware for QBSA

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-29 14:43:03 UTC
From: dombaines
Topic: 3143 Message: 3143

Steve,

Is the firmware for the QBSA available for download?

I have a QBSA but I norte the recent email about it and through they could build one from the docs but unless I cannot find it the code is missing if you try to homebrew it.

73

Dom
M1KTA

3144. RE: [AT_Sprint] WANTED - QRP Base Station Accessory (QBSA) by Steven Weber, KD1JV

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-29 19:49:31 UTC
From: Dale Putnam
Topic: 3142 Message: 3144

If you find two, I'll pick up the second one, Mike.--... ...--Dale - WC7S in Wy

To: AT_Sprint@yahoogroups.comFrom: mpupeza@...: Thu, 29 May 2008 14:21:56 +0000Subject: [AT_Sprint] WANTED - QRP Base Station Accessory (QBSA) by Steven Weber, KD1JV

Hi;I'd like to buy a QRP Base Station Accessory (QBSA) by Steven Weber, KD1JV, in either kit form or assembled.I can pay via PayPal, Check $US, Cheque $CDN, or other.This is to complement my marvelous ATS-3B!Let me know what you have.Thanks,72, 73Mike VE3EQP .....>VE3EQP@...

_____
E-mail for the greater good. Join the i’m Initiative from Microsoft.
http://im.live.com/Messenger/IM/Join/Default.aspx?source=EML_WL_ GreaterGood

3145. RE: [AT_Sprint] WANTED - QRP Base Station Accessory (QBSA) by Steven Weber, KD1JV

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-29 20:56:20 UTC
From: Larry
Topic: 3142 Message: 3145

Hi Mike,

I have one, in kit form, and unpackaged.

- Larry, NU4B

From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com] On Behalf Of mpupeza
Sent: Thursday, May 29, 2008 10:22 AM
To: AT_Sprint@yahoogroups.com
Subject: [AT_Sprint] WANTED - QRP Base Station Accessory (QBSA) by Steven Weber, KD1JV

Hi;
I'd like to buy a QRP Base Station Accessory (QBSA) by Steven Weber, KD1JV, in either kit form or assembled.
I can pay via PayPal, Check $US, Cheque $CDN, or other.
This is to complement my marvelous ATS-3B!
Let me know what you have.
Thanks,
72, 73
Mike VE3EQP .....>
VE3EQP@... <mailto:VE3EQP%40RAC.CA>

3146. BILLG5X setup with Jornada

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-29 23:35:44 UTC
From: kc7fys
Topic: 3146 Message: 3146

Hello,
Noting the photos of your nicely-integrated Tayloe/3B setup--and your Jornada running PocketDigi, were you able to have PSK31 QSOs with this setup as pictured? What kind of interface were you using?
Regards,
Jonathan (fellow Jornada 720 user, but running the W1MT firmware V5)

3147. Re: BILLG5X setup with Jornada

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-30 01:06:44 UTC
From: Bill
Topic: 3146 Message: 3147

--- In AT_Sprint@yahoogroups.com, "kc7fys" <kc7fys@...> wrote:
>
> Hello,
> Noting the photos of your nicely-integrated Tayloe/3B setup--and your
> Jornada running PocketDigi, were you able to have PSK31 QSOs with this
> setup as pictured? What kind of interface were you using?
> Regards,
> Jonathan (fellow Jornada 720 user, but running the W1MT firmware V5)
>
Hi Jonathan,

I haven't yet tried transmitting with the jornada, but I have
with a thinkpad and a simple interface as listed in the manual.
Don't remember the exact specs on it. I hope to try out the
jornada for psk soon and will post my results when I have.

The same interface should work from the headphone audio jack
on the jornada since that is all I was using on the thinkpad.

73,
Bill, ni5x.

3148. Re: BILLG5X setup with Jornada

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-30 14:54:32 UTC
From: mantermeadows
Topic: 3146 Message: 3148

I think the rusty anvil/vise is a nice touch to the portable station.
HI Hi
Gary - KC8UD

3149. ISO: Island Pad Cutter Bit

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-30 23:23:27 UTC
From: kc7fys
Topic: 3149 Message: 3149

Hello folks,
I'm looking for an island pad cutter for manhattan style construction.
Where is this being sold commonly?
Thanks,
Jonathan KC7FYS

3150. Re:[AT_Sprint] Re: BILLG5X setu p with Jornada

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-31 02:09:41 UTC
From: J. Haynes
Topic: 3150 Message: 3150

I had to finally go with a smaller anvil to bring down the weight of my backpack rig.
;-)
jonathan

3151. Re: [AT_Sprint] ISO: Island Pad Cutter Bit

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-31 12:05:33 UTC
From: Lee Boulineau
Topic: 3149 Message: 3151

Try Micro-Mark (Google it) and type in item #s 81418
and 81419 for diamond core drills. These look perfect
for this task.

73 de N4MVL Lee

--- kc7fys <kc7fys@...> wrote:

> Hello folks,
> I'm looking for an island pad cutter for manhattan
> style construction.
> Where is this being sold commonly?
> Thanks,
> Jonathan KC7FYS
>
>

3152. Re: ISO: Island Pad Cutter Bit

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-31 12:33:39 UTC
From: Bill
Topic: 3149 Message: 3152

--- In AT_Sprint@yahoogroups.com, "kc7fys" <kc7fys@...> wrote:
>
> Hello folks,
> I'm looking for an island pad cutter for manhattan style construction.
> Where is this being sold commonly?
> Thanks,
> Jonathan KC7FYS
>
Jonathan,

Have you seen my version of Manhattan style?

http://web.olp.net/bgriffin/tpw/cuclads64.jpg

The picture should be self explanatory.

73,
Bill, ni5x.

3153. Re: [AT_Sprint] ISO: Island Pad Cutter Bit

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-31 12:52:10 UTC
From: James McKinley
Topic: 3149 Message: 3153

Jonathan,
Rex has what your looking for over at QRPme. Scroll down the page to
the `Island cutter kit'

http://www.qrpme.com

Jim WD4OJY

----- Original Message ----
From: kc7fys <kc7fys@...>
To: AT_Sprint@yahoogroups.com
Sent: Friday, May 30, 2008 7:23:27 PM
Subject: [AT_Sprint] ISO: Island Pad Cutter Bit

Hello folks,
I'm looking for an island pad cutter for manhattan style construction.
Where is this being sold commonly?
Thanks,
Jonathan KC7FYS

3154. Re:Re: [AT_Sprint] ISO: Island Pad Cutter Bit

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-05-31 15:29:49 UTC
From: J. Haynes
Topic: 3154 Message: 3154

Thanks all for the tips.
KC7FYS

3155. Re: [AT_Sprint] Re: ISO: Island Pad Cutter Bit

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-01 00:13:35 UTC
From: Stephen Wandling
Topic: 3149 Message: 3155

Now this is the stuff that I think is great. Making good use of stuff that is piling up in gigantic heaps everywhere I look. Thanks for this Bill. Now, where did my fret saw end up after this last move?

72
Stephen
VE7NSD

Bill wrote:
>
> Have you seen my version of Manhattan style?
>
> http://web.olp.net/bgriffin/tpw/cuclads64.jpg
> <http://web.olp.net/bgriffin/tpw/cuclads64.jpg>
>
> The picture should be self explanatory.
>
> 73,
> Bill, ni5x.
>
>

3157. ALTOIDS PA kit

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-02 21:43:18 UTC
From: makoto kasahara
Topic: 3157 Message: 3157

Hi all,
ALTOIDS PA kit was out of the stock.
There is no schedule of the reproduction.
Thank You.
Makoto Kasahara / JN1GLB

3158. ATSIII Wont Go to Straight Key Mode

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-03 02:13:00 UTC
From: c6alk
Topic: 3158 Message: 3158

Hi Steve:

I hate to bother the group with this, but I have tried everything that I know of to try and remedy this situation. I have acquired an ATSIII already built. It has worked just fine for several weeks, but recently developed a fault. When I insert a mono plug into the paddle jack, the keyer does not go into straight key mode as before. I went through each menu selection, and attempted to see if there were any undocumented menu selections that may have changed this mode selection, but no joy. I tried Iambic, mode A and mode B. The mono plug has worked perfectly before. I traced the circuit from the paddle jack up to the input pins on the microcontroller, with and without the mono plug inserted, and all looks OK. Somehow, I feel like I have something set wrong in firmware, but I have not a clue to this point. I am all out of ideas. Can someone give me a hint of where to go next?

Brian K7RE
Spearfish SD

3159. Re: [AT_Sprint] ATSIII Wont Go to Straight Key Mode

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-03 03:43:13 UTC
From: Mark Brueggemann
Topic: 3158 Message: 3159

--- c6alk <K7RE@...> wrote:

> Can someone give me a hint of where to go next?
> Brian K7RE
> Spearfish SD

I'm sure NERD 1 could tell you where to go, and how to get there.
Hi from ABQ.

Mark K5LXP
Albuquerque, NM

3160. Re: [AT_Sprint] ATSIII Wont Go to Straight Key Mode

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-03 03:48:34 UTC
From: Stephen Wandling
Topic: 3158 Message: 3160

When you plug in your straight key, what happens? Does it key
the transmitter or do nothing? If you close the key, what happens?

Stephen
VE7NSD

c6alk wrote:
>
> Hi Steve:
>
> I hate to bother the group with this, but I have tried everything
> that I know of to try and remedy this situation. I have acquired an
> ATSIII already built. It has worked just fine for several weeks, but
> recently developed a fault. When I insert a mono plug into the paddle
> jack, the keyer does not go into straight key mode as before. I
> went through each menu selection, and attempted to see if there were
> any undocumented menu selections that may have changed this mode
> selection, but no joy. I tried Iambic, mode A and mode B. The mono
> plug has worked perfectly before. I traced the circuit from the paddle
> jack up to the input pins on the microcontroller, with and without
> the mono plug inserted, and all looks OK. Somehow, I feel like I have
> something set wrong in firmware, but I have not a clue to this point.
> I am all out of ideas. Can someone give me a hint of where to go next?
>
> Brian K7RE
> Spearfish SD
>
>

3161. Re: [AT_Sprint] ATSIII Wont Go to Straight Key Mode

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-03 10:37:20 UTC
From: Michael Harnage
Topic: 3158 Message: 3161

The only time the port is tested to see if a straight key is attached is at boot up. The straight key needs to be plugged in when power is applied. You can't change it after boot up. Not sure if that is causing your issue?

You can test using a paddle, hold the dah paddle closed while applying power then after boot up use the dit as a straight key (you can release the dah after boot). This will tell you if its the rig or the plug of the straight key.

-mike/w1mt

--- c6alk <K7RE@...> wrote:

> Hi Steve:
>
> I hate to bother the group with this, but I have
> tried everything
> that I know of to try and remedy this situation. I
> have acquired an
> ATSIII already built. It has worked just fine for
> several weeks, but
> recently developed a fault. When I insert a mono
> plug into the paddle
> jack, the keyer does not go into straight key mode
> as before. I
> went through each menu selection, and attempted to
> see if there were
> any undocumented menu selections that may have
> changed this mode
> selection, but no joy. I tried Iambic, mode A and
> mode B. The mono
> plug has worked perfectly before. I traced the
> circuit from the paddle
> jack up to the input pins on the microcontroller,
> with and without
> the mono plug inserted, and all looks OK. Somehow,
> I feel like I have
> something set wrong in firmware, but I have not a
> clue to this point.
> I am all out of ideas. Can someone give me a hint
> of where to go next?
>
> Brian K7RE

> Spearfish SD
>

3162. Re: ATSIII Wont Go to Straight Key Mode

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-03 14:28:24 UTC
From: c6alk
Topic: 3158 Message: 3162

Hello Stephen and group:

Sorry, I should have mentioned the effects of plugging in the mono plug into the key jack. First of all, I made sure that the plug was indeed fully inserted into the paddle jack. I ensured that the plug sleeve was not connected to ground on the outside of the case.

The rig seems to transmit dashes continously as if I was using a paddle wth a stereo plug held to the dash side, from the built-in keyer. Removing the plug causes normal RX operation, keying ceases. There is actual keying of the transmitter, BTW, as normal RF is being seen.

Inserting a blank stereo plug causes no keying at all, exactly what is expected in that case.

For some reason, the microcontroller seems not to be detecting the mono plug. As I mentioned previously, the tip, ring and sleeve connections are correct at the microcontroller pins.

In other words, ground appears at the ring (dash) connection at pin 8 of U-10, and the tip (dot) connection at pin 9 is open. Shorting the dot connection to the ring (straight key keying) causes the dot connection to show ground, all as expected.

This continuity testing was all done with the PCB out of the Altoids case of course.

The weird keying problem ocurrs when the rig is in the Altoids case, but I have no way to check under the board when mounted, if some sort of short is ocurring when the PCB is monuted in the case.

I am beginning to suspect the case though. I will remove the pcb and Hot test it on the bench to see if the problem persists.

I doubt very seriously if this is the cause though. I sure would appreciate anyone's input, simple problem, but it's driving me nuts and prevented me from entering into the Spartan Sprint last night.

If you can please reply to me directly as well as to the group, as I get the group list in digest form, and it can take up to a day to get any replies from the group itself.

Brian K7RE

--- In AT_Sprint@yahoogroups.com, Stephen Wandling <swandling@...> wrote:
>
> When you plug in your straight key, what happens? Does it key

> the transmitter or do nothing? If you close the key, what happens?
>
> Stephen
> VE7NSD
>
> c6alk wrote:
> >
> > Hi Steve:
> >
> > I hate to bother the group with this, but I have tried everything
> > that I know of to try and remedy this situation. I have acquired an
> > ATSIII already built. It has worked just fine for several weeks, but
> > recently developed a fault. When I insert a mono plug into the paddle
> > jack, the keyer does not go into straight key mode as before. I
> > went through each menu selection, and attempted to see if there were
> > any undocumented menu selections that may have changed this mode
> > selection, but no joy. I tried Iambic, mode A and mode B. The mono
> > plug has worked perfectly before. I traced the circuit from the paddle
> > jack up to the input pins on the microcontroller, with and without
> > the mono plug inserted, and all looks OK. Somehow, I feel like I have
> > something set wrong in firmware, but I have not a clue to this point.
> > I am all out of ideas. Can someone give me a hint of where to go next?
> >
> > Brian K7RE
> > Spearfish SD
> >
> >
>

3163. Re: ATSIII Wont Go to Straight Key Mode

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-03 16:20:00 UTC
From: c6alk
Topic: 3158 Message: 3163

Hi Mike and Group:

Yep, having the plug inserted BEFORE boot-up did the trick! The straight key function now works properly. Too bad that I didn't think of this obvious solution before. It just never popped into my mind. I really appreciate the help. Hopefully, in the next edition of the manual for the next run of the ATS3B, the fact that the mono key plug must be inserted *BEFORE* power up will be mentioned. Makes perfect sense after the fact! HI!

Thanks again for all who helped poit tne way.

Brian K7RE
--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:
>
> The only time the port is tested to see if a straight
> key is attached is at boot up. The straight key needs
> to be plugged in when power is applied. You can't
> change it after boot up. Not sure if that is causing
> your issue?
>
> You can test using a paddle, hold the dah paddle
> closed while applying power then after boot up use the
> dit as a straight key (you can release the dah after
> boot). This will tell you if its the rig or the plug
> of the straight key.
>
> -mike/w1mt
>
> --- c6alk <K7RE@...> wrote:
>
> > Hi Steve:
> >
> > I hate to bother the group with this, but I have
> > tried everything
> > that I know of to try and remedy this situation. I
> > have acquired an
> > ATSIII already built. It has worked just fine for
> > several weeks, but
> > recently developed a fault. When I insert a mono
> > plug into the paddle
> > jack, the keyer does not go into straight key mode
> > as before. I
> > went through each menu selection, and attempted to
> > see if there were
> > any undocumented menu selections that may have

> > changed this mode
> > selection, but no joy. I tried Iambic, mode A and
> > mode B. The mono
> > plug has worked perfectly before. I traced the
> > circuit from the paddle
> > jack up to the input pins on the microcontroller,
> > with and without
> > the mono plug inserted, and all looks OK. Somehow,
> > I feel like I have
> > something set wrong in firmware, but I have not a
> > clue to this point.
> > I am all out of ideas. Can someone give me a hint
> > of where to go next?
> >
> > Brian K7RE
> > Spearfish SD
> >
>

3164. Re: ATSIII Wont Go to Straight Key Mode

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-05 13:29:05 UTC
From: w1mt
Topic: 3158 Message: 3164

Just checked the current manual and it's already there:

From page 9:

External Straight key mode is automatically detected and enabled as the rig is powered up when a monaural
plug is in the paddle jack. The sleeve of the mono plug grounds the dash input, which enables straight key
mode. Straight key mode also allows use of an external keyer if one so desires.

--- In AT_Sprint@yahoogroups.com, "c6alk" <K7RE@...> wrote:

> Hopefully, in the next edition of the
> manual for the next run of the ATS3B, the fact that the mono key plug
> must be inserted *BEFORE* power up will be mentioned. Makes perfect
> sense after the fact! HI!
>

3165. Re: ATSIII Wont Go to Straight Key Mode

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-06 13:54:00 UTC
From: Brian Kassel
Topic: 3158 Message: 3165

Yes, it is very well stated in ATS3B manual, glad to see that, but not so clear in the ATS3 manual. At least it is documented now in this group for people who are as unobservant to the manual as myself! BTW, I take the rig out with me daily when I walk my dog for about 45 minutes. I have a small backpack setup with a Hustler mobile antenna. I drag a short counterpoise. Power is a simply 8 cell AA NIMH battery pack. I haven't yet tried to make any QSO's on these trips, just listen. I'm 63 years old with a bad back, so true backpack camping would be difficult. The rig is certainly a marvel of engineering, as well as enjoyable to use, and I am very impressed. Thanks again for all of the help.

Brian K7RE

--
"age, crankiness & treachery will overcome youth energy & skill"

3166. Re: ATSIII Wont Go to Straight Key Mode

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-07 10:09:13 UTC
From: Bruce Beford
Topic: 3158 Message: 3166

--- In AT_Sprint@yahoogroups.com, Brian Kassel <K7RE@...> wrote:
>
> Yes, it is very well stated in ATS3B manual, glad to see that, but
not
> so clear in the ATS3 manual. At least it is documented now in this
> group for people who are as unobservant to the manual as myself!

Straight key mode is described on page 7 of my ATS3 (not A, not B)
manual on Page 7. At least on my version, rev B dated 12/4/2004. This
is the same way all of Steve's keyer rountines have worked for as long
as I can recall. Have fun.

72/73,
Bruce N1RX

3167. NAQCC Sprint Tuesday night!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-07 19:22:59 UTC
From: NAQCC
Topic: 2905 Message: 3167

NAQCC Sprint Tuesday night!
This coming Tuesday evening will be the monthly NAQCC Sprint for June, 2008.

I will refer you to the proper URL:

http://www.arm-tek.net/~yoel/sprint200806.html

There you will find all the details as to time, frequencies and also a special prize.

Since this is Field Day month, our special award goes to the one making the highest score while operating out of doors away from their regular QTH.

This is a monthly event that caters to the CW veteran, the CW newcomer, straight key and bug fans. All are welcome to participate; but you must use QRP power levels to compete for awards.

Come join us and have a real good time!

73 de Dave VA3RJ
NAQCC #0004

3168. Low Audio?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-07 21:01:07 UTC
From: Jim Fraser
Topic: 3168 Message: 3168

I did some comparisons between my RockMite40 and ATS-3B and it seems that maybe the audio output on the 3B is much lower.

With no antenna attached, both the RM40 and 3B (40M module) have a low background hiss. After attaching the antenna the background noise on the 3B is the same, but the RM40 is significantly higher. The sidetone level on the 3B is fine.

When I replaced the antenna with my N0SS Noise Generator, the 3B had what I thought was a more normal background noise level. On the RM40 it was way too loud.

I do hear signals on the 3B, but they seem more robust on the RockMite. I am concerned that I may not hear the weaker signals with the 3B. Yes I have the trimmers peaked on the band modules. All other bands also seem to be low.

Does it seem like I have receiver problems (AGC) or is this normal for the 3B?

Jim K6JF

3169. Re: [AT_Sprint] Low Audio?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-09 01:53:43 UTC
From: Michael Harnage
Topic: 3168 Message: 3169

Jim,

I don't think that is normal.

Off the top of my head, is the rig calibrated, especially the second portion? That might make the difference.

In my experience, if my K2 can hear it, my ATS rigs can hear it.

-mike

> I am concerned that I may not hear the weaker
> signals with the 3B. Yes
> I have the trimmers peaked on the band modules. All
> other bands also
> seem to be low.
>
> Does it seem like I have receiver problems (AGC) or
> is this normal for
> the 3B?
>

3170. Re: Low Audio?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-09 03:36:45 UTC
From: radio_kx0r
Topic: 3168 Message: 3170

--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:

Jim,

I agree with Mike. The ATS rigs are very sensitive. You can hear 0.1 microvolt - or less - once the filters are right. However, AGC doesn't work until the signals are moderately strong, so the ATS rigs differ from some of the commercial rigs with lots of RF/IF gain and heavy AGC action.

This means we use sensitive phones so we can hear the weak guys - they're there - and then we need a volume control to knock the audio back to a comfortable level when a strong station comes on. An audio gain switch with two positions would be OK also.

Some headphones are very insensitive. The ATS rigs want to see something between about 8 and 65 ohms, more or less. The two headphones are put in parallel (mono), so the effective load is half the value of each earphone. The DC resistance is a pretty good approximation of the audio impedance.

If you don't hear signals of medium strength loud in the phones, something may be wrong. Without more information I'm only guessing.

72/73

Carey
KX0R

> Jim,
>
> I don't think that is normal.
>
> Off the top of my head, is the rig calibrated,
> especially the second portion? That might make the
> difference.
>
> In my experience, if my K2 can hear it, my ATS rigs
> can hear it.
>
> -mike
>
> > I am concerned that I may not hear the weaker
> > signals with the 3B. Yes
> > I have the trimmers peaked on the band modules. All
> > other bands also
> > seem to be low.

> >
> > Does it seem like I have receiver problems (AGC) or
> > is this normal for
> > the 3B?
> >
>

3171. Which Headphones?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-09 15:48:30 UTC
From: c6alk
Topic: 3171 Message: 3171

Folks:
I am currently using some 8 ohm headphones of unknown origin with my ATS3. As I am losing my hearing slowly but surely, I want to get a pair of the most sensitive phones that I can find. I would prefer to type that fully encompasses the ear, the padded ear cup type. I really don't like the walkman types, and the in ear ones drive me nuts. Ant suggestions out there? I am sure that some of you have done a thorough investigation of this.

Brian K7RE

3172. RE: [AT_Sprint] Which Headphones?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-09 16:45:37 UTC
From: Dale Putnam
Topic: 3171 Message: 3172

My bride picked up a pair of Colby, from the low end store... something about spend a dollar or what...
anyway, they were inexpensive, and provide a nice padded ear cuff, and are quieting to outside noise, they have a flat response and... and a vol control on each ear... makes up for what might be affecting that side.
I think she said something about 10 bucks.
Good luck, --... ...--Dale - WC7S in Wy

To: AT_Sprint@yahoogroups.comFrom: K7RE@...: Mon, 9 Jun 2008 15:48:30 +0000Subject: [AT_Sprint] Which Headphones?

Folks:I am currently using some 8 ohm headphones of unknown origin with myATS3. As I am losing my hearing slowly but surely, I want to get apair of the most sensitive phones that I can find. I would prefer totype that fully encompasses the ear, the padded ear cup type. Ireally don't like the walkman types, and the in ear ones drive menuts. Ant suggestions out there? I am sure that some of you havedone a thorough investigation of this.Brian K7RE

_____
Enjoy 5 GB of free, password-protected online storage.
http://www.windowslive.com/skydrive/overview.html?ocid=TXT_TAGLM_WL_Refresh_skydrive_062008

3173. Re:[AT_Sprint] Re: Low Audio?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-09 22:35:49 UTC
From: J. Haynes
Topic: 3173 Message: 3173

My dream 3b has a little audio amp built into that space next to the rf connector. There's some serious real estate just languishing there! Then a thin speaker could find its way into the tin, too. That would also boost headphones when necessary. I can tolerate headphones just about 10~20min, then I have a headache. Also the amplified audio is a bit more family-friendly. Dad sitting there in his own world with his headphones on got old fast.
Jonathan on a crowded train to Tokyo. KC7FYS

3174. Re: Re:[AT_Sprint] Re: Low Audio?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-09 22:51:46 UTC
From: WA0ITP
Topic: 3168 Message: 3174

Hi Johnathan,

For a really small amp try this SMALL amp.
http://members.cox.net/n4uau/kits/Kits%20from%20N4UAU.htm

Put a volume control on it...

I love this radio stuff !
72, 73 Terry, WA0ITP
www.wa0dx.org/wa0itp
www.4sqrp.com
www.hams4u.com
www.qrpspots.com

----- Original Message -----
From: J. Haynes
To: careyfuller@comcast.net ; AT_Sprint@yahoogroups.com
Sent: Monday, June 09, 2008 5:35 PM
Subject: Re:[AT_Sprint] Re: Low Audio?

My dream 3b has a little audio amp built into that space next to the rf connector. There's some serious real estate just languishing there! Then a thin speaker could find its way into the tin, too. That would also boost headphones when necessary. I can tolerate headphones just about 10~20min, then I have a headache. Also the amplified audio is a bit more family-friendly. Dad sitting there in his own world with his headphones on got old fast.
Jonathan on a crowded train to Tokyo. KC7FYS

No virus found in this incoming message.
Checked by AVG.
Version: 7.5.524 / Virus Database: 270.0.0/1488 - Release Date: 6/6/2008 5:48 PM

3175. Re: Low Audio?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-10 00:42:09 UTC
From: kc0pet
Topic: 3168 Message: 3175

I have an ATS-3 and I had to try different headphones to find
something that worked well. Generally speaking the cheap earbuds and
such did not work well. I think Carey is right about the headphone
impedence being the issue - the audio amp in the ATS wants lower
impedence headphones and the headphones need to be sensitive.

One thing to try that will take the headphones out of the loop is to
plug in an amplifed speaker (preferably something with a input level
control). Once you get a good level setting on the speaker, then
compare to another known radio. If you still have problems with the
weaker signals, then the problem is probably in the radio.

de KC0PET, Rick

--- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@...>
wrote:
>
> --- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@> wrote:
>
> Jim,
>
> I agree with Mike. The ATS rigs are very sensitive. You can hear
> 0.1 microvolt - or less - once the filters are right. However, AGC
> doesn't work until the signals are moderately strong, so the ATS
rigs
> differ from some of the commercial rigs with lots of RF/IF gain and
> heavy AGC action.
>
> This means we use sensitive phones so we can hear the weak guys -
> they're there - and then we need a volume control to knock the
audio
> back to a comfortable level when a strong station comes on. An
audio
> gain switch with two positions would be OK also.
>
> Some headphones are very insensitive. The ATS rigs want to see
> something between about 8 and 65 ohms, more or less. The two
> headphones are put in parallel (mono), so the effective load is
half
> the value of each earphone. The DC resistance is a pretty good
> approximation of the audio impedance.
>
> If you don't hear signals of medium strength loud in the phones,
> something may be wrong. Without more information I'm only guessing.
>
> 72/73

>
> Carey
> KX0R
>
> > Jim,
> >
> > I don't think that is normal.
> >
> > Off the top of my head, is the rig calibrated,
> > especially the second portion? That might make the
> > difference.
> >
> > In my experience, if my K2 can hear it, my ATS rigs
> > can hear it.
> >
> > -mike
> >
> > > I am concerned that I may not hear the weaker
> > > signals with the 3B. Yes
> > > I have the trimmers peaked on the band modules. All
> > > other bands also
> > > seem to be low.
> > >
> > > Does it seem like I have receiver problems (AGC) or
> > > is this normal for
> > > the 3B?
> > >
> >
>

3176. Re: Low Audio?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-10 01:00:40 UTC
From: Stephen Wandling
Topic: 3168 Message: 3176

On this list or maybe qrp-l, someone had purchased a micro amplified speaker, white, that plugged into an MP3 player. I liked it for its size and that it only used one AAA battery, but it seems it was a clearance item and I couldn't find one.

While cruising The Source by Circuit City, (What Radio Shack has become here in Canada, and its not a change for the better), I found a black one by Centrios for half the price. Same deal, a single AAA battery. It wouldn't plug into the ATS because of the tight plug spacing, so I bought an 8" cable extender with a volume control for six bucks. I find this combo works very well on my ATS. Its not LOUD, but it provides ample volume for these deaf ears. I think it will really come into its own when I get the firmware with SCAN loaded.

72
Stephen
VE7NSD

3177. Re: Low Audio?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-10 01:08:05 UTC
From: Stephen Wandling
Topic: 3168 Message: 3177

Opps. Forgot the link:

http://www.thesource.ca/estore/product.aspx?langauage=fr-ca&product=1410078

Stephen Wandling wrote:
> On this list or maybe qrp-l, someone had purchased a micro amplified
> speaker, white, that plugged into an MP3 player. I liked it for its
> size and that it only used one AAA battery, but it seems it was a
> clearance item and I couldn't find one.
> While cruising The Source by Circuit City, (What Radio Shack has
> become here in Canada, and its not a change for the better), I found a
> black one by Centrios for half the price. Same deal, a single AAA
> battery. It wouldn't plug into the ATS because of the tight plug
> spacing, so I bought an 8" cable extender with a volume control for
> six bucks. I find this combo works very well on my ATS. Its not
> LOUD, but it provides ample volume for these deaf ears. I think it
> will really come into its own when I get the firmware with SCAN loaded.
> 72
> Stephen
> VE7NSD
>

3178. Re: Low Audio?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-10 02:08:02 UTC
From: Jim Fraser
Topic: 3168 Message: 3178

I thought about the headphones too. The walkman-style stereo phones I used are 24 ohms. I also tried a pair of RadioShack communications headphones I had (16 ohm) and the audio was even lower with those. The specs for the LM4808 show ouput figures at 16 ohms and 32 ohms so I think I am OK at 24 ohms.

I went and re-checked the second part of the calibration procedure as suggested and it was OK. Guess I will have to try the bright light and magnification check around the audio section. But not tonight, it was a warm California day today and it is still 84 degress in the shack!

Jim K6JF

3179. Re: [AT_Sprint] Low Audio?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-10 02:12:45 UTC
From: Bill Noyce
Topic: 3168 Message: 3179

> With no antenna attached, both the RM40 and 3B (40M module) have a low
> background hiss. After attaching the antenna the background noise on
> the 3B is the same, but the RM40 is significantly higher. The sidetone
> level on the 3B is fine.

Do you have the same problem on other bands?

The RF signal needs to pass through the toroids on the filter board.
One common problem is a failure to make a good solder connection to
the enameled wire of the toroid (typically, from not stripping the
enamel back far enough). On the bare filter board your ohmmeter
should show a short circuit from P6 to P4 (the low-pass transmit
filter, also used in receive), and each contact of the transformer and
LF4 (the RF choke) should show a short circuit to ground (P5).
Another possible error is to get the transformer windings mixed up --
the two ends of the short winding go in the inner two holes, and the
two ends of the long winding go in the outer two holes. This can't be
checked with the ohmmeter (unless you unsolder something), so look at
it under magnification and push the wires around to make sure you know
which is which.

With no band module installed, can you connect the N0SS noise
generator between pin 1 (signal) and pin 5 (ground) of where the band
module goes? How does the volume compare then?

If the problem isn't in the filter module, the most likely problem is
a poor solder joint on one of the IC's in the receive chain. Connect
a signal source (such as an antenna or your noise generator), and use
a toothpick or similar insulated tool to push down on each pin of each
IC, while listening for an increase in received signal. (You may even
see a pin that moves, but listening is a surer test.) It's also
possible to find a resistor or capacitor in the receive chain with
only one end soldered. Again, good magnification helps.

If signals are there, you should be hearing all but the weakest plenty
loud with just any old headphones.

Good luck!
-- Bill, AB1AV

3180. Re: Low Audio?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-10 02:14:39 UTC
From: Jim Fraser
Topic: 3168 Message: 3180

Rick,

I can get more audio when using the QBSA and its built-in amp instead of the phones, but then the sidetone is way too loud!!

Jim

3181. Altoids stuff

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-10 02:34:10 UTC
From: kc7fys
Topic: 3181 Message: 3181

Prompted by Bill M's Soldersmoke <http://www.soldersmoke.com/>
podcast, I set up a google alert for "Altoids QRP"--and this interesting
link <http://www.headphoneamp.co.kr/ftp/sijosae/Gallery/> came to me
today.
I was particularly impressed with this guy, Sijosae, who builds simple
little audio amps INSIDE the cases of 9V batteries--then replaces the
battery contacts so it still looks like a battery!
He appears to have a very steady hand, and lot of time.
Photo of this device:
http://www.headphoneamp.co.kr/ftp/sijosae/Gallery/CMOY/CMOY-4c.jpg
Interesting.
Jonathan KC7FYS

3182. Headphone volume control plug.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-10 02:39:25 UTC
From: kc7fys
Topic: 3182 Message: 3182

This device in particular looks well-made. Putting a lot into the plug housing itself.
http://www.headphoneamp.co.kr/ftp/sijosae/Gallery/Accesary/ThumbnailPot.jpg
Jonathan

3183. [Fwd: [qrp-l.org] Another New Kit From NorCal!! (really an upgrade, but it is neat)]

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-10 07:45:23 UTC
From: Stephen Wandling
Topic: 3183 Message: 3183

I was pleased to see (below) that Norcal has come out with their FCC2 Mk II DDS VFO. I was especially interested to see that they appear to get the AD9834BRUZ DDS chip to operate up to 31Mhz. Since this is the same chip that's in the ATS3-B, I am wondering if there is a possibility of adding 10M to this great little rig? I know that Steve provided a convincing rationale for not going this high in frequency, but I still hold hope that it might be possible. Do any of you DDS wizards out there have any thoughts on this?

72,
Stephen
VE7NSD

-------- Original Message --------
Subject: [qrp-l.org] Another New Kit From NorCal!! (really an upgrade, but it is neat)
Date: Mon, 9 Jun 2008 21:35:08 -0700 (PDT)
From: ki6ds@...
To: qrp-l@...
CC: qrp-l@...

Bob Okas the genius who designed the FCC-1 and the FCC-2 has done it again. He has upgraded the FCC-2 and it is now known as the FCC-2 Mark II. It is full of new features, and is available right now from NorCal. Go to www.norcalqrp.org and check out the manusl. The selling price without the DDS chip is $40 US and $45 DX. Full ordering details are on the webpage. The FCC-2 has been out of stock for about a month as we retooled to make the improved version available. Bob and his crew have worked hard to make this happen and I want to thank them for their hard work. Dean, Ron, Bob, Paul, Bob Miller and Song Kang all deserve a big thank you for their efforts. Details on the new kit are below.

This is the second generation of the popular FCC-2 introduced in 2006. Recent advances by Analog Devices, the manufacturer of the DDS chip, have enabled increased performance and the latest chip supports a clock frequency that□s 50% higher than the original. This permits the new FCC-2 to produce frequencies up to 31 MHz with the same performance as its predecessor. The firmware has also been enhanced to provide x2 and x4 frequency output, making the FCC-2 Mark II suitable for use with software defined radios which employ frequency division to develop a quadrature LO. Of course, all of the familiar features of the FCC-1 and FCC-2 have been retained.

For those new to the FCC-2, it is an add-on DDS VFO board that extends the basic capabilities of the FCC-1 counter kit. All of the FCC-1 features have been retained, so you won□t lose them by upgrading. A lot of work has been put into this kit to minimize power consumption and permit battery operation for extended periods. Surface mount technology (SMT) has been used extensively to minimize the size and weight of the kit. The FCC-2 is peerless in its low power consumption and flexibility.

The kit features a DC □ 31 MHz DDS (Direct Digital Synthesis) chip, a shaft encoder and provides RTTY support. A new PIC microcontroller is supplied with the kit, which adds the VFO to the basic counter features. The VFO firmware supports 13 bands from 160m through 2m, plus a non-specific, Direct band. There are numerous user-programmable parameters which are stored in EEPROM for one-time setup convenience. You can easily switch between VFO and frequency counter modes and the DDS output will retain its frequency. You□ll see later on how we use this feature to calibrate the counter. The userprogrammable IF offsets and scale factors permit the VFO to operate in a wide range of HF and VHF applications.

Dual VFOs and Split operation are supported in the firmware, and the FCC-2 will operate RTTY straight off your workbench. Just connect a COM port cable and launch the software. I□ve used MMTTY and it works great. You can incorporate the FCC-1/2 combination into a homebrew rig or package them into a separate enclosure for use as a portable test instrument. Typical current consumption for the pair is approximately 70mA. Operation is as simple as connecting a power supply.

72, Doug, KI6DS

---

http://mail.qrp-l.org/mailman/listinfo/qrp-l_qrp-l.org

3184. Re: [AT_Sprint] [Fwd: [qrp-l.org] Another New Kit From NorCal!! (really an upgrade, but it is neat)]

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-10 11:07:52 UTC
From: Michael Harnage
Topic: 3183 Message: 3184

The 9834 in your 3B kits is indeed capable of being clocked at 75MHz. Problem is that oscillators at that speed draw more current. It was also hard to find oscillators at that speed at the time Steve started the 3B. They may be easier to find now though, I haven't looked. You might get lucky and be able to run the dds at 80MHz, then you might be able to run 10M if the rest of the circuitry can handle the faster speeds. Probably have to re look at the regulators to make sure that their not taxed too much. Oh yeah, the filter out of the dds might have to change too....

-mike

--- Stephen Wandling <swandling@...> wrote:

> I was pleased to see (below) that Norcal has come
> out with their FCC2 Mk
> II DDS VFO. I was especially interested to see that
> they appear to get
> the AD9834BRUZ DDS chip to operate up to 31Mhz.
> Since this is the same
> chip that's in the ATS3-B, I am wondering if there
> is a possibility of
> adding 10M to this great little rig? I know that
> Steve provided a
> convincing rationale for not going this high in
> frequency, but I still
> hold hope that it might be possible. Do any of you
> DDS wizards out there
> have any thoughts on this?
>
> 72,
> Stephen
> VE7NSD
>

3185. Re: Which Headphones?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-10 11:45:08 UTC
From: dyarnes1
Topic: 3171 Message: 3185

--- In AT_Sprint@yahoogroups.com, "c6alk" <K7RE@...> wrote:
>
> Folks:
> I am currently using some 8 ohm headphones of unknown origin with my
> ATS3. As I am losing my hearing slowly but surely, I want to get a
> pair of the most sensitive phones that I can find. I would prefer to
> type that fully encompasses the ear, the padded ear cup type. I
> really don't like the walkman types, and the in ear ones drive me
> nuts. Ant suggestions out there? I am sure that some of you have
> done a thorough investigation of this.
>
> Brian K7RE
>

Brian and All,

Finding the right headset to use with the ATS3 is not necessarily easy. Since there is no AF gain control, I prefer to use a headset with an inline volume control. The best earphones I have are Sony brand, and they have the highest sensitivity. Koss makes some good ones too. But since you don't like the "in ear" type, You may be interested in an over-the-ear headphone model I recently found at Tuesday Morning or all places! The brand is Audio Technology, or something like that. But the model number is "AU-541", and if you google that you will find several options of places to buy them. They were dirt cheap at Tuesday Morning--$6 I think. When I googled the model number I found them for around $12, which is still pretty cheap. This model seems to be relatively sensitive, and does have an inline volume control too. I'm reasonably pleased with them, so maybe they would suit your needs.

Since you indicate having a bit of a hearing problem, I might suggest another accessory. For some time I have used a small headphone amplifier (purchased at Radio Shack) with several of my QRP rigs that are a bit anemic on AF output. Radio Shack calls this little amplifier a "Boostaroo", and it sells for about $25. I bought mine on sale for $17 or $18. I've also seen what looks like the identical item under different brand names from other vendors. Anyway, it works great, and also has a built in volume control. This gadget is also very handy for use with my laptop when I am on an airplane. Often the engine noise will drown out the audio from my laptop (and I've found noise canceling headphones only marginally better), but this amp really solves that problem. I would think for someone hearing impaired it would really be a useful item. It's internally battery powered, and the batteries seem to last quite a while. This thing actually has provision for connecting two headphones, so two people

can listen with more than adequate volume. If you buy this unit, you could probably use any set of headphones you want--whichever is the most comfortable. In your situation I'd be more inclined to try this first, instead of a bunch of trial and error on headphones that might disappoint.

Hope this helps.

Dave W7AQK

3186. RE: [AT_Sprint] Re: Low Audio?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-10 14:26:35 UTC
From: Dale Putnam
Topic: 3168 Message: 3186

I'm using an AT3, and find the sidetone rather hot too. Is there an easy way to lower just the side tone,
maybe with an external switch to allow a higher level for certain situations?--...
...--Dale - WC7S in Wy

To: AT_Sprint@yahoogroups.comFrom: jimf53@...: Tue, 10 Jun 2008 02:14:39 +0000Subject: [AT_Sprint] Re: Low Audio?

Rick, I can get more audio when using the QBSA and its built-in amp instead of the phones, but then the sidetone is way too loud!!Jim

_____
It’s easy to add contacts from Facebook and other social sites through Windows Live™ Messenger. Learn how.
https://www.invite2messenger.net/im/?source=TXT_EML_WLH_LearnHow

3187. Re: [AT_Sprint] [Fwd: [qrp-l.org] Another New Kit From NorCal!! (really an upgrade, but it is neat)]

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-10 14:40:19 UTC
From: ehydra
Topic: 3183 Message: 3187

Get a 25MHz XTAL oscillator. They are common for Ethernet apps. Resonate
it with a LC and extract the third harmonic. Feed a line receiver or
comparator with it. Voila!

- Henry

Michael Harnage schrieb:
> The 9834 in your 3B kits is indeed capable of being
> clocked at 75MHz. Problem is that oscillators at that
> speed draw more current. It was also hard to find
> oscillators at that speed at the time Steve started
> the 3B. They may be easier to find now though, I
> haven't looked. You might get lucky and be able to run
> the dds at 80MHz, then you might be able to run 10M if
> the rest of the circuitry can handle the faster
> speeds. Probably have to re look at the regulators to
> make sure that their not taxed too much. Oh yeah, the
> filter out of the dds might have to change too....
>
> -mike
>
>
> --- Stephen Wandling <swandling@...> wrote:
>
>> I was pleased to see (below) that Norcal has come
>> out with their FCC2 Mk
>> II DDS VFO. I was especially interested to see that
>> they appear to get
>> the AD9834BRUZ DDS chip to operate up to 31Mhz.
>> Since this is the same
>> chip that's in the ATS3-B, I am wondering if there
>> is a possibility of
>> adding 10M to this great little rig? I know that
>> Steve provided a
>> convincing rationale for not going this high in
>> frequency, but I still
>> hold hope that it might be possible. Do any of you
>> DDS wizards out there
>> have any thoughts on this?
>>
>> 72,
>> Stephen
>> VE7NSD
>>

>
>
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>
>

--
www.ehydra.dyndns.info

3188. Re: [AT_Sprint] Re: Low Audio?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-10 16:45:04 UTC
From: Y.Hum
Topic: 3173 Message: 3188

J. Haynes wrote:
> My dream 3b has a little audio amp built into that space next to the rf connector. There's some serious real estate just languishing there! Then a thin speaker could find its way into the tin, too. That would also boost headphones when necessary. I can tolerate headphones just about 10~20min, then I have a headache. Also the amplified audio is a bit more family-friendly. Dad sitting there in his own world with his headphones on got old fast.
> Jonathan on a crowded train to Tokyo. KC7FYS
>
>
I picked up this little speaker from local discount store for CDN$ 5.00

http://www2.shopxscargo.com/product_catalogue/cat_product_quick_search.asp
search for "mini speaker"

or

http://www.latest-mobile.com/articles/portable-audio/mini-cube-speaker_4481

It is perfect for all my DIY QRP rigs when I do not want to wear the headphone.

Ying
VA3YH

3189. Re: [Fwd: [qrp-l.org] Another New Kit From NorCal!! CORRECTION

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-10 17:42:58 UTC
From: Stephen Wandling
Topic: 3183 Message: 3189

I kind of jumped the gun. The chip used in the new Norcal FCC2 DDS VFO is the AD9834CRUZ and not the AD9834BRUZ that's used in the ATS3-B. I am not conversant in what this means, but I wanted to correct my original post.

If the AD9834CRUZ does have some advantage over the AD9834BRUZ, you can get a free sample of the AD9834CRUZ from Analog Devices.

I note that the FCC2 circuit does not use a crystal at all. Whether this relates to their getting an output frequency of 31Mhz, I don't know.

As always, I'm chasing ideas.

72
Stephen
VE7NSD

Stephen Wandling wrote:
> I was pleased to see (below) that Norcal has come out with their FCC2
> Mk II DDS VFO. I was especially interested to see that they appear to
> get the AD9834BRUZ DDS chip to operate up to 31Mhz. Since this is the
> same chip that's in the ATS3-B, I am wondering if there is a
> possibility of adding 10M to this great little rig? I know that Steve
> provided a convincing rationale for not going this high in frequency,
> but I still hold hope that it might be possible. Do any of you DDS
> wizards out there have any thoughts on this?
>
> 72,
> Stephen
> VE7NSD
>
> -------- Original Message --------
> Subject: [qrp-l.org] Another New Kit From NorCal!! (really an
> upgrade, but it is neat)
> Date: Mon, 9 Jun 2008 21:35:08 -0700 (PDT)
> From: ki6ds@...
> To: qrp-l@...
> CC: qrp-l@...
>
>
>
> Bob Okas the genius who designed the FCC-1 and the FCC-2 has done it
> again. He has upgraded the FCC-2 and it is now known as the FCC-2 Mark
> II. It is full of new features, and is available right now from
> NorCal. Go to www.norcalqrp.org and check out the manusl. The selling

> price
> without the DDS chip is $40 US and $45 DX. Full ordering details are on
> the webpage. The FCC-2 has been out of stock for about a month as we
> retooled to make the improved version available. Bob and his crew have
> worked hard to make this happen and I want to thank them for their hard
> work. Dean, Ron, Bob, Paul, Bob Miller and Song Kang all deserve a big
> thank you for their efforts. Details on the new kit are below.
>
>
> This is the second generation of the popular FCC-2 introduced in 2006.
> Recent advances by Analog Devices, the manufacturer of the DDS chip, have
> enabled increased performance and the latest chip supports a clock
> frequency that□s 50% higher than the original. This permits the new FCC-2
> to produce frequencies up to 31 MHz with the same performance as its
> predecessor. The firmware has also been enhanced to provide x2 and x4
> frequency output, making the FCC-2 Mark II suitable for use with software
> defined radios which employ frequency division to develop a quadrature
> LO.
> Of course, all of the familiar features of the FCC-1 and FCC-2 have been
> retained.
>
> For those new to the FCC-2, it is an add-on DDS VFO board that extends
> the
> basic capabilities of the FCC-1 counter kit. All of the FCC-1 features
> have been retained, so you won□t lose them by upgrading. A lot of work
> has
> been put into this kit to minimize power consumption and permit battery
> operation for extended periods. Surface mount technology (SMT) has been
> used extensively to minimize the size and weight of the kit. The FCC-2 is
> peerless in its low power consumption and flexibility.
>
>
>
>
> The kit features a DC □ 31 MHz DDS (Direct Digital Synthesis) chip, a
> shaft encoder and provides RTTY support. A new PIC microcontroller is
> supplied with the kit, which adds the VFO to the basic counter features.
> The VFO firmware supports 13 bands from 160m through 2m, plus a
> non-specific, Direct band. There are numerous user-programmable
> parameters
> which are stored in EEPROM for one-time setup convenience. You can easily
> switch between VFO and frequency counter modes and the DDS output will
> retain its frequency. You□ll see later on how we use this feature to
> calibrate the counter. The userprogrammable IF offsets and scale factors
> permit the VFO to operate in a wide range of HF and VHF applications.
>
> Dual VFOs and Split operation are supported in the firmware, and the
> FCC-2
> will operate RTTY straight off your workbench. Just connect a COM port

> cable and launch the software. I□ve used MMTTY and it works great. You
> can
> incorporate the FCC-1/2 combination into a homebrew rig or package them
> into a separate enclosure for use as a portable test instrument. Typical
> current consumption for the pair is approximately 70mA. Operation is as
> simple as connecting a power supply.
>
> 72, Doug, KI6DS
>
>
>
> _____
> http://mail.qrp-l.org/mailman/listinfo/qrp-l_qrp-l.org
>
>
>

3190. Re: [AT_Sprint] AD9834C v AD9834B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-10 20:12:47 UTC
From: Michael Harnage
Topic: 3183 Message: 3190

The FCC2 Mk2 uses a 75MHz oscillator (it's U3). This limits its usefulness to 25MHz. (In practice it is acceptable to stretch this a little, which is what they have done to get to 31MHz. Steve does the same in the ATS rigs.). AD actually specs it to output 37.5MHz but I believe that you will have too many spurs if you push it that far.

Only diff between the AD9834CRUZ and AD9834BRUZ is the MCLK spec. (B=50MHz and C=75MHz). I believe that the B grade used to be spec'ed at 75MHz because that is why Steve used it in the 3B. Not sure why/when AD changed it.

Notice also that the power draw for the FCC2 Mk2 is 70ma vice 30ma for the original FCC2. Much of that is used by the 75MHz oscillator. :)

-mike

--- Stephen Wandling <swandling@...> wrote:

>
> I note that the FCC2 circuit does not use a crystal
> at all. Whether
> this relates to their getting an output frequency of
> 31Mhz, I don't know.
>

3191. RE: [AT_Sprint] Re: Low Audio?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-10 20:51:02 UTC
From: Dale Putnam
Topic: 3173 Message: 3191

I've a handfull of the 5w audio amp modules out of a set of pagers.... that we used to make.
Hve been thinking about putting one into the 3... if someone wants me to, I would enjoy doing that
for someone....email direct, please. However, it would be the prototype.
Thanks,--... ...--Dale - WC7S in Wy

To: AT_Sprint@yahoogroups.comFrom: qrp.ham@...: Tue, 10 Jun 2008 12:45:04 -0400Subject: Re: [AT_Sprint] Re: Low Audio?

J. Haynes wrote:> My dream 3b has a little audio amp built into that space next to the rf connector. There's some serious real estate just languishing there! Then a thin speaker could find its way into the tin, too. That would also boost headphones when necessary. I can tolerate headphones just about 10~20min, then I have a headache. Also the amplified audio is a bit more family-friendly. Dad sitting there in his own world with his headphones on got old fast. > Jonathan on a crowded train to Tokyo. KC7FYS>> I picked up this little speaker from local discount store for CDN$ 5.00http://www2.shopxscargo.com/product_catalogue/cat_product_quick_search.aspsearch for "mini
speaker"orhttp://www.latest-mobile.com/articles/portable-audio/mini-cube-speaker_4481It is perfect for all my DIY QRP rigs when I do not want to wear theheadphone.YingVA3YH

_____
Enjoy 5 GB of free, password-protected online storage.
http://www.windowslive.com/skydrive/overview.html?ocid=TXT_TAGLM_WL_Refresh_skydrive_062008

3192. Re: [AT_Sprint] AD9834C v AD9834B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-10 22:33:01 UTC
From: Stephen Wandling
Topic: 3183 Message: 3192

Michael,

Thanks for sorting this out. But, I have to admit that I am still hopeful that a 10M ATS rig is possible and reasonable!

I find it interesting that AD has now downgraded the AD9834B to 50Mhz. Steve discusses it as a 75Mhz device in the manual and I wonder if he might have actually tried to get it to work acceptably at 10M, but found that it didn't and lowered his oscillator frequency to 60Mhz to conserve power. If that's the case, then there might be reason to try it again?

If the old FCC2 drew 30Ma, and since the 70Ma figure for the FCC2 Mk II includes the 30Ma for the FCC1, then there is only a 10Ma increase and I am assuming that there might be other reasons than a higher speed oscillator? As noted below, I am not qualified to be wrong on the subject!

I am buying the FCC2 Mk II and will be interested in whether there are any spurs at the high end of its spectrum.

Now, is it possible to build a filter board for 10M and with changes to the firmware (I'm presuming), get the rig to work at those frequencies? I am thinking of this as a test. One might also switch to the AD9834C to see if this helps. Is it as simple as I suggest, or are there other changes that have to be made? I suspect that the oscillator would have to be changed to 75Mhz, and I have no idea what changes that might trigger. And let me be the first to say that I am not setup to do this or am I experienced in this level of electronics. I terminated my formal electronics career in 1967 and apparently much has transpired in the interim. :-)

I am encouraged by the facts that Steve pushed the rig to the 12M band, or about 41% of the 60Mhz oscillator and presumably got a signal with acceptable spurs. 41% of a 75Mhz oscillator gives about 31Mhz. So, with the AD9834C it seems possible to reach 10M and stay within Steve's own parameters.

I will be interested to hear what Steve's thoughts are on this subject.

72
Stephen
VE7NSD

Michael Harnage wrote:
>
> The FCC2 Mk2 uses a 75MHz oscillator (it's U3). This
> limits its usefulness to 25MHz. (In practice it is
> acceptable to stretch this a little, which is what

> they have done to get to 31MHz. Steve does the same in
> the ATS rigs.). AD actually specs it to output 37.5MHz
> but I believe that you will have too many spurs if you
> push it that far.
>
> Only diff between the AD9834CRUZ and AD9834BRUZ is the
> MCLK spec. (B=50MHz and C=75MHz). I believe that the B
> grade used to be spec'ed at 75MHz because that is why
> Steve used it in the 3B. Not sure why/when AD changed
> it.
>
> Notice also that the power draw for the FCC2 Mk2 is
> 70ma vice 30ma for the original FCC2. Much of that is
> used by the 75MHz oscillator. :)
>
> -mike
>
> --- Stephen Wandling <swandling@...
> <mailto:swandling%40gmail.com>> wrote:
>
> >
> > I note that the FCC2 circuit does not use a crystal
> > at all. Whether
> > this relates to their getting an output frequency of
> > 31Mhz, I don't know.
> >
>
>

3193. Re: [AT_Sprint] AD9834C v AD9834B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-11 04:13:28 UTC
From: Stephen Wandling
Topic: 3183 Message: 3193

Just to sort out an error in my calculations at the end of the message below. Obviously, the ATS3-B doesn't yet have a 12M band, with 15M as its highest band. (You can tell I haven't built all of my filter boards yet) So, 15M would be about 36% of the frequency of a 60Mhz oscillator and 36% of a 75Mhz oscillator would be about 27Mhz. Not quite 10M. But close. Higher than 12M.

Stephen
VE7NSD

Stephen Wandling wrote:
> Michael,
>
> Thanks for sorting this out. But, I have to admit that I am still
> hopeful that a 10M ATS rig is possible and reasonable!
>
> I find it interesting that AD has now downgraded the AD9834B to
> 50Mhz. Steve discusses it as a 75Mhz device in the manual and I
> wonder if he might have actually tried to get it to work acceptably at
> 10M, but found that it didn't and lowered his oscillator frequency to
> 60Mhz to conserve power. If that's the case, then there might be
> reason to try it again?
>
> If the old FCC2 drew 30Ma, and since the 70Ma figure for the FCC2 Mk
> II includes the 30Ma for the FCC1, then there is only a 10Ma increase
> and I am assuming that there might be other reasons than a higher
> speed oscillator? As noted below, I am not qualified to be wrong on
> the subject!
>
> I am buying the FCC2 Mk II and will be interested in whether there are
> any spurs at the high end of its spectrum.
>
> Now, is it possible to build a filter board for 10M and with changes
> to the firmware (I'm presuming), get the rig to work at those
> frequencies? I am thinking of this as a test. One might also switch
> to the AD9834C to see if this helps. Is it as simple as I suggest, or
> are there other changes that have to be made? I suspect that the
> oscillator would have to be changed to 75Mhz, and I have no idea what
> changes that might trigger. And let me be the first to say that I am
> not setup to do this or am I experienced in this level of
> electronics. I terminated my formal electronics career in 1967 and
> apparently much has transpired in the interim. :-)
>
> I am encouraged by the facts that Steve pushed the rig to the 12M
> band, or about 41% of the 60Mhz oscillator and presumably got a signal

> with acceptable spurs. 41% of a 75Mhz oscillator gives about 31Mhz.
> So, with the AD9834C it seems possible to reach 10M and stay within
> Steve's own parameters.
>
> I will be interested to hear what Steve's thoughts are on this subject.
>
> 72
> Stephen
> VE7NSD
>
> Michael Harnage wrote:
>>
>> The FCC2 Mk2 uses a 75MHz oscillator (it's U3). This
>> limits its usefulness to 25MHz. (In practice it is
>> acceptable to stretch this a little, which is what
>> they have done to get to 31MHz. Steve does the same in
>> the ATS rigs.). AD actually specs it to output 37.5MHz
>> but I believe that you will have too many spurs if you
>> push it that far.
>>
>> Only diff between the AD9834CRUZ and AD9834BRUZ is the
>> MCLK spec. (B=50MHz and C=75MHz). I believe that the B
>> grade used to be spec'ed at 75MHz because that is why
>> Steve used it in the 3B. Not sure why/when AD changed
>> it.
>>
>> Notice also that the power draw for the FCC2 Mk2 is
>> 70ma vice 30ma for the original FCC2. Much of that is
>> used by the 75MHz oscillator. :)
>>
>> -mike
>>
>> --- Stephen Wandling <swandling@...
>> <mailto:swandling%40gmail.com>> wrote:
>>
>> >
>> > I note that the FCC2 circuit does not use a crystal
>> > at all. Whether
>> > this relates to their getting an output frequency of
>> > 31Mhz, I don't know.
>> >
>>
>>
>

3194. Re: AD9834C v AD9834B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-11 14:21:44 UTC
From: radio_kx0r
Topic: 3183 Message: 3194

--- In AT_Sprint@yahoogroups.com, Stephen Wandling <swandling@...>
wrote:

Stephen,

I believe that Steve Weber addressed this question several months
ago - he wrote here about the fact that the DDS really could be
pushed to 28 Mhz out, but the high current was one of the problems.
He also mentioned the spurious signals.

I think you could find his messages(s) here using the search box. I
haven't time right now, but I know he mentioned this - lots of us
would love to have a 10M ATS rig when the sunspots come back and 10M
is open around the world with 5W and a dipole in a tree.

There's always a chance Steve or someone else will decide to build a
dedicated rig for the upper HF bands. A second conversion might be
used to avoid having to push the DDS so high. This has some trade-
offs.

72/73

KX0R
Carey

>
> Just to sort out an error in my calculations at the end of the
message
> below. Obviously, the ATS3-B doesn't yet have a 12M band, with 15M
as
> its highest band. (You can tell I haven't built all of my filter
boards
> yet) So, 15M would be about 36% of the frequency of a 60Mhz
oscillator
> and 36% of a 75Mhz oscillator would be about 27Mhz. Not quite
10M. But
> close. Higher than 12M.
>
> Stephen
> VE7NSD
>
> Stephen Wandling wrote:
> > Michael,
> >
> > Thanks for sorting this out. But, I have to admit that I am
still
> > hopeful that a 10M ATS rig is possible and reasonable!

> >
> > I find it interesting that AD has now downgraded the AD9834B to
> > 50Mhz. Steve discusses it as a 75Mhz device in the manual and I
> > wonder if he might have actually tried to get it to work
acceptably at
> > 10M, but found that it didn't and lowered his oscillator
frequency to
> > 60Mhz to conserve power. If that's the case, then there might be
> > reason to try it again?
> >
> > If the old FCC2 drew 30Ma, and since the 70Ma figure for the FCC2
Mk
> > II includes the 30Ma for the FCC1, then there is only a 10Ma
increase
> > and I am assuming that there might be other reasons than a higher
> > speed oscillator? As noted below, I am not qualified to be wrong
on
> > the subject!
> >
> > I am buying the FCC2 Mk II and will be interested in whether
there are
> > any spurs at the high end of its spectrum.
> >
> > Now, is it possible to build a filter board for 10M and with
changes
> > to the firmware (I'm presuming), get the rig to work at those
> > frequencies? I am thinking of this as a test. One might also
switch
> > to the AD9834C to see if this helps. Is it as simple as I
suggest, or
> > are there other changes that have to be made? I suspect that the
> > oscillator would have to be changed to 75Mhz, and I have no idea
what
> > changes that might trigger. And let me be the first to say that
I am
> > not setup to do this or am I experienced in this level of
> > electronics. I terminated my formal electronics career in 1967
and
> > apparently much has transpired in the interim. :-)
> >
> > I am encouraged by the facts that Steve pushed the rig to the 12M
> > band, or about 41% of the 60Mhz oscillator and presumably got a
signal
> > with acceptable spurs. 41% of a 75Mhz oscillator gives about
31Mhz.
> > So, with the AD9834C it seems possible to reach 10M and stay
within
> > Steve's own parameters.
> >
> > I will be interested to hear what Steve's thoughts are on this

subject.
> >
> > 72
> > Stephen
> > VE7NSD
> >
> > Michael Harnage wrote:
> >>
> >> The FCC2 Mk2 uses a 75MHz oscillator (it's U3). This
> >> limits its usefulness to 25MHz. (In practice it is
> >> acceptable to stretch this a little, which is what
> >> they have done to get to 31MHz. Steve does the same in
> >> the ATS rigs.). AD actually specs it to output 37.5MHz
> >> but I believe that you will have too many spurs if you
> >> push it that far.
> >>
> >> Only diff between the AD9834CRUZ and AD9834BRUZ is the
> >> MCLK spec. (B=50MHz and C=75MHz). I believe that the B
> >> grade used to be spec'ed at 75MHz because that is why
> >> Steve used it in the 3B. Not sure why/when AD changed
> >> it.
> >>
> >> Notice also that the power draw for the FCC2 Mk2 is
> >> 70ma vice 30ma for the original FCC2. Much of that is
> >> used by the 75MHz oscillator. :)
> >>
> >> -mike
> >>
> >> --- Stephen Wandling <swandling@...
> >> <mailto:swandling%40gmail.com>> wrote:
> >>
> >> >
> >> > I note that the FCC2 circuit does not use a crystal
> >> > at all. Whether
> >> > this relates to their getting an output frequency of
> >> > 31Mhz, I don't know.
> >> >
> >>
> >>
> > >
>

3195. Re: [AT_Sprint] Re: AD9834C v AD9834B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-11 16:21:22 UTC
From: Stephen Wandling
Topic: 3183 Message: 3195

Carey,

Thanks for the tip. I found Steve's message and have copied it below. We live in a world of very rapid changes (Sunspot cycles being a notable exception! :-)) Analog Devices has re-instituted the 75Mhz 9834 and the FCC2 uses a small 75Mhz oscillator.

But I am reminded of Edward de Bono's book "The Six Thinking Hats" that proposed the metaphor of changing hats to structure thinking and discussion. (Most of my books are still in storage, so this is from memory) The blue hat was for "blue sky" thinking: no limits; what if?; etc. The red hat was for voicing objections, the white for 'doing the numbers'; cost benefit analysis, etc. The main point being that he felt it was best if there was an agreement on what hat they were wearing at any stage. It is intended to avoid situations where A says "Let's build a gazortchblatz and B says "I hate the gazortchblatz" and C says "Escher tried to build one and it was impossible". I love de Bono's work. If the world would implement his thinking it would be a much better place.

I want to concede that 10M isn't the hottest of bands right now. That being said, there are probably other things that might take priority over getting 10M operability on the ATS. But that need not preclude a bit of 'blue sky' discussion. The sunspots will come again!

I'm aware that there are only a few on this list that do most of the "heavy lifting", when it comes to the ATS rigs, and I am not interested in increasing their load. Nor am I in any way criticizing the ATS design or Steve's work. I love this rig. I think its amazing. It has definitely set the benchmark for rigs that are small AND full featured.

I confess to being a synergist. I have very varied interests and delight in finding something in one area that might somehow fit in with another. That's just how my head works. Sometimes these ideas are useful and often they're not useful, . . . yet. Timing is everything. For me, its great to have a list like this where I can throw out ideas and get a valuable response. Thanks for being there.

72
Stehen
VE7NSD

radio_kx0r wrote:
>
> I believe that Steve Weber addressed this question several months ago
> - he wrote here about the fact that the DDS really could be pushed to
> 28 Mhz out, but the high current was one of the problems. He also
> mentioned the spurious signals. <snip>

>

~~~~~~~~~~~~~~~~~~~~~~

> If the DDS chip was replaced with a 75 MHz version, and the clock
>oscillator also replaced with a 75 MHz clock, would it be possible to
>put the ATS-3B on 12m, given the right module components and software
>changes? Are the modules simple double-sided boards? It sure would be
>nice to have yet another higher band for field work.

75 MHz clocks don't seem to be commonly available. I tired a 80 MHz clock with a 9834 I had from before AD changed the clock speed spec for the chip and it worked fine. With the 80 MHz clock, I was able to make the rig work on both 12 and 10 meters.

However, there were two issues. One, the rig's current went up to over 50 ma on receive due to the high current of the 80 MHz clock and fast clocking of the DDS chip. Second, the transmitter output filters were very touchy to adjust. Very small changes in the spacing of the wire on the cores made a huge change in output power.

Even though it was possible to make the rig work on 12 and 10, I decided it wasn't worth the current penalty and the expense of yet another two filter boards, especially since it will still be some years before these bands are of much use.

It made more sense to only go up to 15 meters, which only added 10 ma to the current compaired to the 3A and these bands had more chance of seeing use in the near future.

Anyway, I'm working on a small SSB rig which will cover 20 to 10 meters, though at the moment, I'm in no rush to get it done. Just want to have it ready for when these bands start to become active again :-)
~~~~~~~~~~~~~~~~~~~~~~

3196. No output power

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-11 20:26:21 UTC
From: Andreas Burkart
Topic: 3196 Message: 3196

Folks,

I finished my ATS-3B. The rig worked in the beginning and produced approx 1 W on a 9 V battery. When I powered up the rig last night on a fresh 9V batterty I noticed that I am not getting any power out of the rig anymore not matter what filter board I use.

I can see a signal at the input of U8c (at R19) when keying, however nothing after that.

I wonder if somebody could me some trouble shooting ideas, in specific what to look for. I inspected the solder joints but could not find anything in specific.

It truly appreciate your help.

72/72
kgy4pyp

3197. Re: [AT_Sprint] No output power

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-11 21:07:16 UTC
From: Michael Harnage
Topic: 3196 Message: 3197

First two things to check:

1. Use a battery with some power. 9v batteries don't
last long and can't provide the current to tx for
long.

2. Recheck the leads on L3 to make sure they are
tinned correctly and soldered properly. If the enamel
was not removed completely it could cause no power.

If neither of these do the trick let us know and we'll
try other stuff.

-mike

--- Andreas Burkart <kg4pyp@...> wrote:

> Folks,
>
> I finished my ATS-3B. The rig worked in the
> beginning and produced
> approx 1 W on a 9 V battery. When I powered up the
> rig last night on a
> fresh 9V batterty I noticed that I am not getting
> any power out of
> the rig anymore not matter what filter board I use.
>
> I can see a signal at the input of U8c (at R19)
> when keying, however
> nothing after that.
>
> I wonder if somebody could me some trouble shooting
> ideas, in
> specific what to look for. I inspected the solder
> joints but could
> not find anything in specific.
>
> It truly appreciate your help.
>
> 72/72
> kgy4pyp
>
>
> ------------------------------------
>
> Yahoo! Groups Links

>
>
>
>
>

3198. Re: [AT_Sprint] Re: AD9834C v AD9834B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-11 22:44:43 UTC
From: Alan Biocca
Topic: 3183 Message: 3198
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

3199. ATS-3 problem

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-12 02:19:51 UTC
From: Larry Makoski
Topic: 3168 Message: 3199

Yep,

I have an ATS3 problem. Not a 3A or 3B; but after a few years on the shelf; I finally got to building my ATS3. I finished it last week and got the comforting Morse Code in the headphones; but nothing else.

The voltages on U1 and U2 seem OK as per the chart in the manual. But as I go across R21, I develop a problem. On the supply side of the resistor, I get 4.95V. On the other side, the U3, U4, U5 side, I read 3.0V. Something is seriously bringing the voltage down. I double checked the soldering and component placement and orientation and everything seems nominal. I'm thinking that I have a defective U3, U4 or U5.

Any thoughts would be appreciated.

73 de Larry W2LJ

--
73 de Larry W2LJ
QRP - When you care to send the very least!

http://www.w2lj.qrpradio.com
http://w2lj.blogspot.com/

3200. Re: [AT_Sprint] ATS-3 problem

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-12 11:09:32 UTC
From: Michael Harnage
Topic: 3168 Message: 3200

If this is the 330K resistor. THen this message from
Steve may help:

> > Okay, belive I have the final fix for the now
> > infamous "reset problem".
> > Radically reduce the value of R22 from 330K to 270
> > ohms. I had the right
> > idea, just the wrong values.

-mike/w1mt

--- Larry Makoski <Makos327@...> wrote:

> Yep,
>
> I have an ATS3 problem. Not a 3A or 3B; but after a
> few years on the
> shelf; I finally got to building my ATS3. I
> finished it last week and
> got the comforting Morse Code in the headphones; but
> nothing else.
>
> The voltages on U1 and U2 seem OK as per the chart
> in the manual. But
> as I go across R21, I develop a problem. On the
> supply side of the
> resistor, I get 4.95V. On the other side, the U3,
> U4, U5 side, I read
> 3.0V. Something is seriously bringing the voltage
> down. I double
> checked the soldering and component placement and
> orientation and
> everything seems nominal. I'm thinking that I have
> a defective U3, U4
> or U5.
>
> Any thoughts would be appreciated.
>
> 73 de Larry W2LJ
>
> --
> 73 de Larry W2LJ
> QRP - When you care to send the very least!
>
> http://www.w2lj.qrpradio.com
> http://w2lj.blogspot.com/

>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>
>
>

3201. Any Word?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-12 12:33:39 UTC
From: Kurt Savegnago
Topic: 3168 Message: 3201

Hi,

Any word yet on Steve's, KD1JV, status? I expect
some folks are still anxious to hear if there is
another run of the 3b in the offing and the timeframe
to expect its' release.
My interest is purely selfish in that I have a
Small Wonders Labs DSW-!! 40 meter tranceiver that
transmits just fine but my receiver just doesn't work
properly. Dave Benson has Steve listed as the go to
guy who is willing to trouble shoot and fix.
I really would like to get the unit operating
sometime and wanted to make arrangements with Steve to
somehow fit it into his busy schedule.

Kurt KC9LDH

3202. Re: [AT_Sprint] Any Word?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-12 12:41:31 UTC
From: Michael Harnage
Topic: 3168 Message: 3202

He's been off the trail for two weeks or so. He posted
on another list a few days ago. He got sick on the
trail and is probably resting and trying to get caught
up to speed on everything.

Did you try emailing him yet?

-mike

--- Kurt Savegnago <ksaves2@...> wrote:

> Hi,
>
> Any word yet on Steve's, KD1JV, status? I expect
> some folks are still anxious to hear if there is
> another run of the 3b in the offing and the
> timeframe
> to expect its' release.
> My interest is purely selfish in that I have a
> Small Wonders Labs DSW-!! 40 meter tranceiver that
> transmits just fine but my receiver just doesn't
> work
> properly. Dave Benson has Steve listed as the go to
> guy who is willing to trouble shoot and fix.
> I really would like to get the unit operating
> sometime and wanted to make arrangements with Steve
> to
> somehow fit it into his busy schedule.
>
> Kurt KC9LDH
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>
>
>

3203. Re: No output power

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-12 15:17:32 UTC
From: c6alk
Topic: 3196 Message: 3203

Here are some tips:

I had a problem with my ATS 3 like yours, no TX output. I didn't actually build this rig, so wiggled a few components and found that R-15 was not properly soldered. Simply heating up the connection fixed the problem. The connection appeared to be fine, but must have had a hairline crack. Reheating, carefully, connections around. R-13, Q4, R14,C53, C54, R-15, C56, Q5, and the 2N7000's might fix it for you without to much troubleshooting.

The 2N7000's need two signals/voltages to work. One is the RF signal from U7, and the other is the keyed B+ from the NDT2955.

Tracing the Keyed voltage:

When keyed, you should see B+ voltage on the drain pins of each 2N7000. This can be measured at the ungrounded side of C-56. If you see this, then check the signal through the filter board.
If you don't see this B+ switched voltage upon keying, then look at the input of the NDT2955 Mosfet switch. This chip is oddly shaped, and has a large pin on the right, 3 smaller pins on the left. You should see switched B+ (key down, causes voltage)on the large pin (the Drain pin). The top pin of the 3 smaller pins on the left is the Gate pin, the second one down (the middle one) is another connection to the Drain pin. The Gate pin should show Ground on Key down. The bottom pin is the Source pin, and should have +5 volts on it. I am not sure, but I think that this voltage is there at all times.
Tracing back, you should see a ground on key down at the top of R15, both sides of R14, the tops of C53 and C54., the collector of Q-4 (right hand single pin). You should see a 3-4 volt signal upon key down at the base of Q4. The top left pin is the base. The bottom left pin is the emitter, at constant ground. This signal comes from U-10 pin 16, through R13.

Tracing further back for the RF signal:

At the Gate pin of each 2N7000, you should see an RF signal with a scope, Diode RF detector etc.. This also can be see at pin 1 or pin 4 of U-7, a 74HC02. The input to U7 is from U-6, the AD9834. If the rig works in receive, then U-7 should be working OK. If you don't see s signal here, look for cold solder joint between U6 and U7.

When I had my TX problem, I made a hand drawn diagram with voltages and waveforms of all this, so I simply referred to that here.

Hopefully there were no errors in my description above made when I converted the picture into text here.

It is true that one picture is worth a thousand words!

I hope that this helps,

Brian K7RE

--- In AT_Sprint@yahoogroups.com, "Andreas Burkart" <kg4pyp@...> wrote:
>
> Folks,
>
> I finished my ATS-3B. The rig worked in the beginning and produced
> approx 1 W on a 9 V battery. When I powered up the rig last night on a
> fresh 9V batterty I noticed that I am not getting any power out of
> the rig anymore not matter what filter board I use.
>
> I can see a signal at the input of U8c (at R19) when keying, however
> nothing after that.
>
> I wonder if somebody could me some trouble shooting ideas, in
> specific what to look for. I inspected the solder joints but could
> not find anything in specific.
>
> It truly appreciate your help.
>
> 72/72
> kgy4pyp
>

3204. Re: [AT_Sprint] Any Word?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-12 15:34:27 UTC
From: Kurt Savegnago
Topic: 3168 Message: 3204

Thanks Mike,

I tried about a week ago but I figured he would have
had such a backlog, he might just delete everything
and start over.:-)

"If they have something important, they'll email
again."

I want to be in the "again" time frame so he'll
be able to see the note. I'm in no hurry and don't
want to be a bother.;-)

Kurt KC9LDH

--- Michael Harnage <w1mt@...> wrote:

> He's been off the trail for two weeks or so. He
> posted
> on another list a few days ago. He got sick on the
> trail and is probably resting and trying to get
> caught
> up to speed on everything.
>
> Did you try emailing him yet?
>
> -mike

3205. Re: [AT_Sprint] ATS-3 problem

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-12 16:55:03 UTC
From: Michael Harnage
Topic: 3168 Message: 3205

Nevermind my previous post, I was looking at an old
schematic where R22 was mismarked as R21.

Check current draw while on to make sure it is within
spec. 25-30ma should be fine. Much more and you
probably have a short somewhere.

Try using a toothpick (or other non conductive item)
to push down on the leads of U5,U4 and U3 while
powered on. Listen to see if the rx becomes active
while pushing on the leads. Sometimes a joint will
look good but in fact be bad. Since you have sidetone
it appears that U5 might be OK, as well as U3b. Double
or triple check every joint in the audio chain from
R21 to L4. You may need to look upstream in the chain
all the way back to U1. Look especially for solder
bridges on the IC's. If you have a scope (or perhaps
an rf probe) check for a signal at R5, C22, C21,
C18/C19, C10, C6 to try and figure out which
IC/components might be the culprit.

My bet is on a bad joint somewhere vice a bad part. I
have never seen these parts be bad, but guess there
could always be a first time.

Btw, if you have an early version (where R22 is 330K)
you will want to change R22 from 330K to 270 ohms.

-mike

--- Michael Harnage <w1mt@...> wrote:

> If this is the 330K resistor. THen this message from
> Steve may help:
>
> > > Okay, belive I have the final fix for the now
> > > infamous "reset problem".
> > > Radically reduce the value of R22 from 330K to
> 270
> > > ohms. I had the right
> > > idea, just the wrong values.
>
> -mike/w1mt
>

3206. Not output power - resolved

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-12 17:48:52 UTC
From: Andreas Burkart
Topic: 3206 Message: 3206

Folks,

I took your advice and re-heated some of the solder joints and checked
L3.
Additionally I cleaned the board carefully with some alcohol. I
noticed that very small metal shavings from th altoid box bridged
possibly one of the solder connection.

Can you give me a source where you can order the 6 pin SIP socket? I
damaged mine with my my solder iron.

As a next step I will take KX0R's instructions how to optimize the
output power.

72/73
KG4PYP

3207. Re: [AT_Sprint] Any Word?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-12 19:13:58 UTC
From: Chris Herd
Topic: 3168 Message: 3207

Kurt Savegnago wrote:
>
> Hi,
>
> Any word yet on Steve's, KD1JV, status? I expect
> some folks are still anxious to hear if there is
> another run of the 3b in the offing and the timeframe
> to expect its' release.
> My interest is purely selfish in that I have a
> Small Wonders Labs DSW-!! 40 meter tranceiver that
> transmits just fine but my receiver just doesn't work
> properly. Dave Benson has Steve listed as the go to
> guy who is willing to trouble shoot and fix.
> I really would like to get the unit operating
> sometime and wanted to make arrangements with Steve to
> somehow fit it into his busy schedule.
>
> Kurt KC9LDH
>
>
Hi

Steves web site says there are a few units available.

Enjoy

Chris

3208. Re: Not output power - resolved

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-13 03:22:01 UTC
From: Jim Fraser
Topic: 3206 Message: 3208

I got some 36-pin strips from Mouser Electronics and cut them down to six pins. I used them for storing the other 5 band modules by soldering them to a pad-per-hole circuit board.

Anyway the Mouser P/N is 517-850-01-36, $2.41

http://www.mouser.com/Search/ProductDetail.aspx?qs=kc%2fM%2frumzCVxL43fsku9gw%3d%3d

You can get the strips with other pin counts, check out the page in the catalog: http://www.mouser.com/catalog/634/1329.pdf

Jim K6JF

--- In AT_Sprint@yahoogroups.com, "Andreas Burkart" <kg4pyp@...> wrote:
>
> Folks,
>
> I took your advice and re-heated some of the solder joints and checked
> L3.
> Additionally I cleaned the board carefully with some alcohol. I
> noticed that very small metal shavings from th altoid box bridged
> possibly one of the solder connection.
>
> Can you give me a source where you can order the 6 pin SIP socket? I
> damaged mine with my my solder iron.
>
> As a next step I will take KX0R's instructions how to optimize the
> output power.
>
> 72/73
> KG4PYP
>

3209. Re:[AT_Sprint] Re: Not output p ower - resolved

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-13 04:04:26 UTC
From: J. Haynes
Topic: 3209 Message: 3209

Two pins would work-maybe even better. I know I have to do some rocking and cajoling to plug/unplug modules.
Jonathan KC7FYS

3210. Filter Board Modifications - Capacitor selection !

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-13 14:12:20 UTC
From: Andreas Burkart
Topic: 3210 Message: 3210

Iam going to make the changes as recommended by KX0R. For the radial disc capacitors can you go with wide tolerance (20%) or do you need to go with tight ones (5%)? I assume that 50V should be fine

kg4pyp

3211. (no subject)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-13 20:20:24 UTC
From: Stephen Wandling
Topic: 3211 Message: 3211

When I finished my Bee, I used the alternate method of setting the oscillator frequency, because I didn't have a frequency counter. Yesterday my FCC1 kit arrived and I built it this morning. I thought I would try it on the ATS.

I apply power with Split/Tune Down depressed and get the CF (C on the display). At TP1 the FCC1 reads 10,000,000.080. So I use the Tune Down to bring it to 10Mhz. I press Menu and get the CO and low tone, I press Menu to skip this (I did this before), and the ATS resets. I am under the impression that the frequency is now set at 10Mhz.

But, when I start the process over (power up with Split/Tune Down depressed), to make sure it works, the frequency is back to 10,000,000.080.

I'm running out of ideas. Any assistance will be appreciated.

72
Stephen
VE7NSD

3212. Calibration Reset

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-13 22:37:08 UTC
From: Jim Fraser
Topic: 3211 Message: 3212

Stephen:

The defaults are loaded every time you enter calibration mode per Steve's post below, so any previous adjustments are lost.

http://groups.yahoo.com/group/AT_Sprint/message/2566

Jim K6JF

--- In AT_Sprint@yahoogroups.com, Stephen Wandling <swandling@...> wrote:
>
> When I finished my Bee, I used the alternate method of setting the
> oscillator frequency, because I didn't have a frequency counter.
> Yesterday my FCC1 kit arrived and I built it this morning. I thought I
> would try it on the ATS.
>
> I apply power with Split/Tune Down depressed and get the CF (C on the
> display). At TP1 the FCC1 reads 10,000,000.080. So I use the Tune Down
> to bring it to 10Mhz. I press Menu and get the CO and low tone, I press
> Menu to skip this (I did this before), and the ATS resets. I am under
> the impression that the frequency is now set at 10Mhz.
>
> But, when I start the process over (power up with Split/Tune Down
> depressed), to make sure it works, the frequency is back to 10,000,000.080.
>
> I'm running out of ideas. Any assistance will be appreciated.
>
> 72
> Stephen
> VE7NSD
>

3213. Re: [AT_Sprint] Calibration Reset

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-13 23:48:51 UTC
From: Stephen Wandling
Topic: 3211 Message: 3213

Jim,

Thanks for this. From reading the series of posts you point to below, I realized that I was also resetting my LO and had to do that again as well.

72
Stephen
VE7NSD

Jim Fraser wrote:
>
> Stephen:
>
> The defaults are loaded every time you enter calibration mode per
> Steve's post below, so any previous adjustments are lost.
>
> http://groups.yahoo.com/group/AT_Sprint/message/2566
> <http://groups.yahoo.com/group/AT_Sprint/message/2566>
>
> Jim K6JF
>
> --- In AT_Sprint@yahoogroups.com <mailto:AT_Sprint%40yahoogroups.com>,
> Stephen Wandling <swandling@...>
> wrote:
> >
> > When I finished my Bee, I used the alternate method of setting the
> > oscillator frequency, because I didn't have a frequency counter.
> > Yesterday my FCC1 kit arrived and I built it this morning. I
> thought I
> > would try it on the ATS.
> >
> > I apply power with Split/Tune Down depressed and get the CF (C on
> the
> > display). At TP1 the FCC1 reads 10,000,000.080. So I use the Tune
> Down
> > to bring it to 10Mhz. I press Menu and get the CO and low tone, I
> press
> > Menu to skip this (I did this before), and the ATS resets. I am
> under
> > the impression that the frequency is now set at 10Mhz.
> >
> > But, when I start the process over (power up with Split/Tune Down
> > depressed), to make sure it works, the frequency is back to
> 10,000,000.080.
> >
> > I'm running out of ideas. Any assistance will be appreciated.

> >
> > 72
> > Stephen
> > VE7NSD
> >
>
>

3214. Re: [AT_Sprint] Calibration Reset

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-14 00:13:27 UTC
From: Stephen Wandling
Topic: 3211 Message: 3214

My next level of questioning is: How does one know if their rig's frequency is accurate? Or how does one check their rig's frequency for accuracy?

I have just completed the calibration of the CO and LO. I fire up the ATS on 40M and measure the LO frequency with the rig tuned to the default 7030Khz. It reads 2115.27Khz, but by calculation, it should be 2114.8Khz. If this is the case, then I have an inaccuracy of 0.47Khz. It would appear that the ATS is really tuned to 7030.47Khz?

Leaving everything the same and running the ATS into a dummy load and tuning the IC706, the ATS would appear to be transmitting at about 7029.87Khz. That's a 0.600Khz difference from the calculated receive frequency.

Am I getting inaccurate readings for one reason or another? Or maybe I should suspect my newly built FCC1 frequency counter?

72
Stephen
VE7NSD

Jim Fraser wrote:
>
> Stephen:
>
> The defaults are loaded every time you enter calibration mode per
> Steve's post below, so any previous adjustments are lost.
>
> http://groups.yahoo.com/group/AT_Sprint/message/2566
> <http://groups.yahoo.com/group/AT_Sprint/message/2566>
>
> Jim K6JF
>
> --- In AT_Sprint@yahoogroups.com <mailto:AT_Sprint%40yahoogroups.com>,
> Stephen Wandling <swandling@...>
> wrote:
> >
> > When I finished my Bee, I used the alternate method of setting the
> > oscillator frequency, because I didn't have a frequency counter.
> > Yesterday my FCC1 kit arrived and I built it this morning. I
> thought I
> > would try it on the ATS.
> >
> > I apply power with Split/Tune Down depressed and get the CF (C on
> the

> > display). At TP1 the FCC1 reads 10,000,000.080. So I use the Tune
> Down
> > to bring it to 10Mhz. I press Menu and get the CO and low tone, I
> press
> > Menu to skip this (I did this before), and the ATS resets. I am
> under
> > the impression that the frequency is now set at 10Mhz.
> >
> > But, when I start the process over (power up with Split/Tune Down
> > depressed), to make sure it works, the frequency is back to
> 10,000,000.080.
> >
> > I'm running out of ideas. Any assistance will be appreciated.
> >
> > 72
> > Stephen
> > VE7NSD
> >
>
>

3215. Re: [AT_Sprint] Calibration Reset

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-14 01:42:06 UTC
From: Michael Harnage
Topic: 3211 Message: 3215

Put the 40m module in and tune to W1AW or CHU (if it's
still there). You should hear the respective main
carriers at 7.0475 or 7.335. If you have my firmware
put the 30M module in and tune to 10.0MHz. CHU is
probably more accurate than W1AW. CHU transmits on
other freqs as well. <
http://inms-ienm.nrc-cnrc.gc.ca/time_services/shortwave_broadcasts_e.html
>

The |tx-rx| freq is 600Hz so that you can have
something to hear. The rig will display (or
annunciate) the freq you transmit on. The rx freq has
to be 600Hz off so that you can create the audio tone
of 600Hz with the mixers.

A note on the calibration. If the calibration was not
reset to the defaults each time you entered cal mode
you could get the rig in a very bad condition with
virtually no hope of fixing it unless you reloaded the
firmware. When I setup a rig I write down the offsets
in a form like this: +13/-5 Which to me means click
up 13 times during CF and down 5 times during CO. This
way I don't have to hook up the rig to the computer
and another radio to recalibrate it. :)

If you haven't tried it, have a look at my cal
procedure at: <
http://w1mt.qrpradio.com/ats3calibration.html > I
wrote it a while ago but the principle still remains
valid. It's what I use to calibrate a rig.

If you have another rig to recv WWV then you can
calibrate the rig as good as your gonna get without
expensive test equipment. Perhaps just as well given
the granularity of the adjustments.

-mike

--- Stephen Wandling <swandling@...> wrote:

> My next level of questioning is: How does one know
> if their rig's
> frequency is accurate? Or how does one check their
> rig's frequency for
> accuracy?
>
> I have just completed the calibration of the CO and

> LO. I fire up the
> ATS on 40M and measure the LO frequency with the rig
> tuned to the
> default 7030Khz. It reads 2115.27Khz, but by
> calculation, it should be
> 2114.8Khz. If this is the case, then I have an
> inaccuracy of 0.47Khz.
> It would appear that the ATS is really tuned to
> 7030.47Khz?
>
> Leaving everything the same and running the ATS into
> a dummy load and
> tuning the IC706, the ATS would appear to be
> transmitting at about
> 7029.87Khz. That's a 0.600Khz difference from the
> calculated receive
> frequency.
>
> Am I getting inaccurate readings for one reason or
> another? Or maybe I
> should suspect my newly built FCC1 frequency
> counter?
>
> 72
> Stephen
> VE7NSD
>

3216. Re: [AT_Sprint] Calibration Reset

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-14 02:16:33 UTC
From: Stephen Wandling
Topic: 3211 Message: 3216

Michael,

Thanks for the response.

I am aware of tuning to a known station and have done this from time to time. What I had noticed in general, was that with the ATS, lots of stations were not on an even frequency such as 7030, but would appear to be on 7030.1, or 7040.1, etc. This made me suspicious and is what inspired me to re-calibrate the ATS.

I thought the 600Hz sounded familiar: of course its the offset to allow the CW signal to be heard.

Your scary comment: "If the calibration was not reset to the defaults each time you entered cal mode", needs some clarification, please. I simply entered CF mode, noted that the frequency was 80Hz to 90Hz high and pressed the Tune Down to correct this and then pressed Menu to save. Is there something else I am supposed to do? If so, what?

I understand the granularity in the tuning, but I am not clear why I can't get the ATS to be closer to the displayed frequency than 470Hz. This is my biggest concern and I am unclear if you addressed this.

It was my intention to use a frequency counter with my Bee when I am using it on the bench, much like the QBSA did. It was my understanding that I would connect it to the LO out, and program the counter to reflect the IF frequency of 4915.2Khz. Is this correct.

72
Stephen
VE7NSD

Michael Harnage wrote:
>
> Put the 40m module in and tune to W1AW or CHU (if it's
> still there). You should hear the respective main
> carriers at 7.0475 or 7.335. If you have my firmware
> put the 30M module in and tune to 10.0MHz. CHU is
> probably more accurate than W1AW. CHU transmits on
> other freqs as well. <
> http://inms-ienm.nrc-cnrc.gc.ca/time_services/shortwave_broadcasts_e.html
> <http://inms-ienm.nrc-cnrc.gc.ca/time_services/shortwave_broadcasts_e.html>
> >
>
> The |tx-rx| freq is 600Hz so that you can have
> something to hear. The rig will display (or
> annunciate) the freq you transmit on. The rx freq has

> to be 600Hz off so that you can create the audio tone
> of 600Hz with the mixers.
>

>
> A note on the calibration. If the calibration was not
> reset to the defaults each time you entered cal mode
> you could get the rig in a very bad condition with
> virtually no hope of fixing it unless you reloaded the
> firmware. When I setup a rig I write down the offsets
> in a form like this: +13/-5 Which to me means click
> up 13 times during CF and down 5 times during CO. This
> way I don't have to hook up the rig to the computer
> and another radio to recalibrate it. :)
>
> If you haven't tried it, have a look at my cal
> procedure at: <
> http://w1mt.qrpradio.com/ats3calibration.html
> <http://w1mt.qrpradio.com/ats3calibration.html> > I
> wrote it a while ago but the principle still remains
> valid. It's what I use to calibrate a rig.
>
> If you have another rig to recv WWV then you can
> calibrate the rig as good as your gonna get without
> expensive test equipment. Perhaps just as well given
> the granularity of the adjustments.
>
> -mike
>
> --- Stephen Wandling <swandling@...
> <mailto:swandling%40gmail.com>> wrote:
>
> > My next level of questioning is: How does one know
> > if their rig's
> > frequency is accurate? Or how does one check their
> > rig's frequency for
> > accuracy?
> >
> > I have just completed the calibration of the CO and
> > LO. I fire up the
> > ATS on 40M and measure the LO frequency with the rig
> > tuned to the
> > default 7030Khz. It reads 2115.27Khz, but by
> > calculation, it should be
> > 2114.8Khz. If this is the case, then I have an
> > inaccuracy of 0.47Khz.
> > It would appear that the ATS is really tuned to
> > 7030.47Khz?
> >
> > Leaving everything the same and running the ATS into

> > a dummy load and
> > tuning the IC706, the ATS would appear to be
> > transmitting at about
> > 7029.87Khz. That's a 0.600Khz difference from the
> > calculated receive
> > frequency.
> >
> > Am I getting inaccurate readings for one reason or
> > another? Or maybe I
> > should suspect my newly built FCC1 frequency
> > counter?
> >
> > 72
> > Stephen
> > VE7NSD
> >
>
>

3217. Re: [AT_Sprint] Calibration Reset

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-14 02:23:00 UTC
From: Stephen Wandling
Topic: 3211 Message: 3217

Michael,

In re-reading your post I note your clarification that the rig displays
the transmit frequency, and not the receive. That would make the
'error' 130Hz, which is better than 470Hz, but its still a concern, and
I would like it to be zero.

72
Stephen
VE7NSD

Michael Harnage wrote:
>
> Put the 40m module in and tune to W1AW or CHU (if it's
> still there). You should hear the respective main
> carriers at 7.0475 or 7.335. If you have my firmware
> put the 30M module in and tune to 10.0MHz. CHU is
> probably more accurate than W1AW. CHU transmits on
> other freqs as well. <
> http://inms-ienm.nrc-cnrc.gc.ca/time_services/shortwave_broadcasts_e.html
> <http://inms-ienm.nrc-cnrc.gc.ca/time_services/shortwave_broadcasts_e.html>
> >
>
> The |tx-rx| freq is 600Hz so that you can have
> something to hear. The rig will display (or
> annunciate) the freq you transmit on. The rx freq has
> to be 600Hz off so that you can create the audio tone
> of 600Hz with the mixers.
>
> A note on the calibration. If the calibration was not
> reset to the defaults each time you entered cal mode
> you could get the rig in a very bad condition with
> virtually no hope of fixing it unless you reloaded the
> firmware. When I setup a rig I write down the offsets
> in a form like this: +13/-5 Which to me means click
> up 13 times during CF and down 5 times during CO. This
> way I don't have to hook up the rig to the computer
> and another radio to recalibrate it. :)
>
> If you haven't tried it, have a look at my cal
> procedure at: <
> http://w1mt.qrpradio.com/ats3calibration.html
> <http://w1mt.qrpradio.com/ats3calibration.html> > I
> wrote it a while ago but the principle still remains
> valid. It's what I use to calibrate a rig.
>

> If you have another rig to recv WWV then you can
> calibrate the rig as good as your gonna get without
> expensive test equipment. Perhaps just as well given
> the granularity of the adjustments.
>
> -mike
>
> --- Stephen Wandling <swandling@...
> <mailto:swandling%40gmail.com>> wrote:
>
> > My next level of questioning is: How does one know
> > if their rig's
> > frequency is accurate? Or how does one check their
> > rig's frequency for
> > accuracy?
> >
> > I have just completed the calibration of the CO and
> > LO. I fire up the
> > ATS on 40M and measure the LO frequency with the rig
> > tuned to the
> > default 7030Khz. It reads 2115.27Khz, but by
> > calculation, it should be
> > 2114.8Khz. If this is the case, then I have an
> > inaccuracy of 0.47Khz.
> > It would appear that the ATS is really tuned to
> > 7030.47Khz?
> >
> > Leaving everything the same and running the ATS into
> > a dummy load and
> > tuning the IC706, the ATS would appear to be
> > transmitting at about
> > 7029.87Khz. That's a 0.600Khz difference from the
> > calculated receive
> > frequency.
> >
> > Am I getting inaccurate readings for one reason or
> > another? Or maybe I
> > should suspect my newly built FCC1 frequency
> > counter?
> >
> > 72
> > Stephen
> > VE7NSD
> >
>
>

3218. Re: [AT_Sprint] Calibration Reset

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-14 02:35:06 UTC
From: Michael Harnage
Topic: 3211 Message: 3218

Nothing else to do, you're doing it fine. I was trying
to explain why the calibration resets the defaults
for each calibration rather than "building" on what
was already stored for the those constants.

You should indeed be able to get closer than 130Hz.
With Steve's firmware you should be able to get to +/-
10Hz.

Remember that your calibration is only as good as your
frequency source. Few of use have properly calibrated
frequency counters and the best thing we have access
to is WWV. Simple matter to put the WWV (10MHz of
course) signal "on top" of the calibration signal from
the ATS rig using a second receiver and a spectrum
display as I describe on my website. If your ear is
really good you can do this by zero beating the
signals on the second receiver.

Hope this is making some sense.

-mike

--- Stephen Wandling <swandling@...> wrote:

>
> Your scary comment: "If the calibration was not
> reset to the defaults
> each time you entered cal mode", needs some
> clarification, please. I
> simply entered CF mode, noted that the frequency was
> 80Hz to 90Hz high
> and pressed the Tune Down to correct this and then
> pressed Menu to
> save. Is there something else I am supposed to do?
> If so, what?
>
> I understand the granularity in the tuning, but I am
> not clear why I
> can't get the ATS to be closer to the displayed
> frequency than 470Hz.
> This is my biggest concern and I am unclear if you
> addressed this.
>

3219. Re: [AT_Sprint] Calibration Reset

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-14 02:44:45 UTC
From: Stephen Wandling
Topic: 3211 Message: 3219

Thanks Michael,

Its good to hear that I can get to +/- 10 Hz!

I do have a concern about the calibration of the FCC1, which I just fired up and calibrated today. The zerobeat dip is very broad and this gives me some concern. I was using the FCC1's 250Khz output to zerobeat with WWV, as per instructions. I used AM mode to do this, as I do not hear any zerobeat with CW or SSB. This may be the root of my problem?

72
Stephen
VE7NSD

Michael Harnage wrote:
> Nothing else to do, you're doing it fine. I was trying
> to explain why the calibration resets the defaults
> for each calibration rather than "building" on what
> was already stored for the those constants.
>
> You should indeed be able to get closer than 130Hz.
> With Steve's firmware you should be able to get to +/-
> 10Hz.
>
> Remember that your calibration is only as good as your
> frequency source. Few of use have properly calibrated
> frequency counters and the best thing we have access
> to is WWV. Simple matter to put the WWV (10MHz of
> course) signal "on top" of the calibration signal from
> the ATS rig using a second receiver and a spectrum
> display as I describe on my website. If your ear is
> really good you can do this by zero beating the
> signals on the second receiver.
>
> Hope this is making some sense.
>
> -mike
>
>
> --- Stephen Wandling <swandling@...> wrote:
>
>
>
>> Your scary comment: "If the calibration was not
>> reset to the defaults
>> each time you entered cal mode", needs some

>> clarification, please. I
>> simply entered CF mode, noted that the frequency was
>> 80Hz to 90Hz high
>> and pressed the Tune Down to correct this and then
>> pressed Menu to
>> save. Is there something else I am supposed to do?
>> If so, what?
>>
>> I understand the granularity in the tuning, but I am
>> not clear why I
>> can't get the ATS to be closer to the displayed
>> frequency than 470Hz.
>> This is my biggest concern and I am unclear if you
>> addressed this.
>>
>>
>
>
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>
>
>

3220. Re: Calibration Reset

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-14 05:39:33 UTC
From: radio_kx0r
Topic: 3211 Message: 3220

--- In AT_Sprint@yahoogroups.com, Stephen Wandling <swandling@...>
wrote:

Stephen,

Here's a way to check your counter - crude but easy to do:

If you have a fairly stable oscillator, or generator, warm it up for a while. Then listen with a receiver to WWV or another "standard" station, and tune your oscillator on top of it. You will need to adjust the relative level of your two signals so you can hear a good beat. Adjust your oscillator as close to zero beat as possible, and measure its frequency with your counter. You may be able to use an S-meter to get closer to zero beat if you have trouble hearing the softly varying beat sounds.

If your counter is perfect, you should read out the frequency of the standard station. Any error will tell you how far off your counter is, and in which direction. This may enable you to figure out a correction factor. Even better, if your counter's reference oscillator is adjustable, you can correct it until your "transfer" oscillator reads correct when zero beat to the standard station.

A good transfer oscillator is a VXO - variable crystal oscillator - running near 10.000000000 Mhz. 10 Mhz crystals are cheap and available, and a stable VXO would not be hard to build. I'm ashamed to admit that I need to build one of these for my shack.... If the VXO is done right, it becomes a convenient secondary standard. Similar devices are available on the Internet. Some use calibrated TCXO's.

There are many variations on this theme. It should be possible to get within a few Hz, or closer, using the transfer oscillator and a corrected counter.

I have confidence in the ATS calibration scheme - both my "A" and "B" came out about the same, according to my counter, which has a TCXO reference. My "A" will tune to 10.000000 Mhz, so I can play some games with WWV, a second receiver, etc. I think I'm within 20 Hz or so, but without a good transfer oscillator, I'm fudging.

We're still waiting for someone with a really good counter to measure the drift of the ATS-3B and see how much it changes during a QSO, from cold start, etc.

I have an old Heathkit counter that reads to 1 Hz, but I don't have any solid reason to believe it's any more stable than the "B" - maybe

if I leave it on for a while I could rely on it. The transfer oscillator would settle that question also.

You can see where this is going....

Every oscillator and every crystal has error and drift. You can get control if you find a way to compare and adjust a low-drift oscillator to a standard station, so you have a nice convenient source right there in your shack.

Remember that until recently, most of the small QRP rigs had relatively poor stability and accuracy. The DDS rigs represent a huge improvement. To do better you would need a TCXO reference oscillator. The ATS rigs are precision tools compared to what we have previously used. I have a hunch that even if you set an ATS to 10 Hz, it may not hold that accuracy over the range of common outdoor temperatures, like from 0 degrees F to 100 degrees F. I don't know - I haven't measured mine. I have access to an environmental chamber and a good counter, so I may run a test some day.

It really doesn't matter. The ATS rigs do a great job. They actually run well from below zero F to at least 100 degrees F. To beat an ATS you need a much bigger rig and everything else that goes with that.

Try for 10 Hz...

72/73

Carey
KX0R

>
> Thanks Michael,
>
> Its good to hear that I can get to +/- 10 Hz!
>
> I do have a concern about the calibration of the FCC1, which I just
> fired up and calibrated today. The zerobeat dip is very broad and
this
> gives me some concern. I was using the FCC1's 250Khz output to
zerobeat
> with WWV, as per instructions. I used AM mode to do this, as I do
not
> hear any zerobeat with CW or SSB. This may be the root of my
problem?
>
> 72
> Stephen
> VE7NSD
>
> Michael Harnage wrote:

> > Nothing else to do, you're doing it fine. I was trying
> > to explain why the calibration resets the defaults
> > for each calibration rather than "building" on what
> > was already stored for the those constants.
> >
> > You should indeed be able to get closer than 130Hz.
> > With Steve's firmware you should be able to get to +/-
> > 10Hz.
> >
> > Remember that your calibration is only as good as your
> > frequency source. Few of use have properly calibrated
> > frequency counters and the best thing we have access
> > to is WWV. Simple matter to put the WWV (10MHz of
> > course) signal "on top" of the calibration signal from
> > the ATS rig using a second receiver and a spectrum
> > display as I describe on my website. If your ear is
> > really good you can do this by zero beating the
> > signals on the second receiver.
> >
> > Hope this is making some sense.
> >
> > -mike
> >
> >
> > --- Stephen Wandling <swandling@...> wrote:
> >
> >
> >
> >> Your scary comment: "If the calibration was not
> >> reset to the defaults
> >> each time you entered cal mode", needs some
> >> clarification, please. I
> >> simply entered CF mode, noted that the frequency was
> >> 80Hz to 90Hz high
> >> and pressed the Tune Down to correct this and then
> >> pressed Menu to
> >> save. Is there something else I am supposed to do?
> >> If so, what?
> >>
> >> I understand the granularity in the tuning, but I am
> >> not clear why I
> >> can't get the ATS to be closer to the displayed
> >> frequency than 470Hz.
> >> This is my biggest concern and I am unclear if you
> >> addressed this.
> >>
> >>
> >
> >
> >

> >
> > ------------------------------------
> >
> > Yahoo! Groups Links
> >
> >
> >
> >
> >
>

3221. Re:[AT_Sprint] Re: Calibration Reset

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-14 05:46:46 UTC
From: J. Haynes
Topic: 3221 Message: 3221

... You say your WHAT hertz?

3222. Re: [AT_Sprint] (unknown)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-14 11:37:56 UTC
From: mbhayden
Topic: 3211 Message: 3222
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

3223. Re: [AT_Sprint] (unknown)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-14 11:39:21 UTC
From: mbhayden
Topic: 3211 Message: 3223
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

3224. Re: Low Audio?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-14 19:44:57 UTC
From: Jim Fraser
Topic: 3168 Message: 3224

Yes, the problem is identical on all bands. I am still confused about U5, the AGC chip AN6123MS. Steve lists the pins and voltages in the documentation as follows:

Pin 1 - 1.3v Audio In
Pin 2 - 0v GND
Pin 3 - 5.0v V+
Pin 4 - 0.34v Vagc
Pin 5 - 0.96v Audio Out

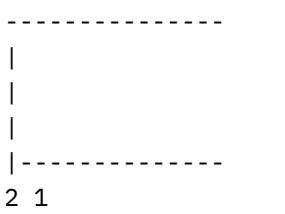
However, the data sheet for the AN6123MS device identifies the pins as follows:

Pin 1 - Vcc
Pin 2 - DET
Pin 3 - Audio Input
Pin 4 - GND
Pin 5 - Audio Out

That the pin functions do not match is confusing. The voltages I read are as follows:

Pin 1 - 5.01v
Pin 2 - 0v
Pin 3 - 0.93v
Pin 4 - 0v
Pin 5 - 1.27v

using the AN6123MS Pinout



Could someone with a functional Bee do a quick measurement of the voltages on this device and report the findings.

Jim K6JF

3225. Re: [AT_Sprint] Re: Low Audio?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-14 22:58:22 UTC
From: Stephen Wandling
Topic: 3168 Message: 3225

Jim,

Firstly, in my manual on page 27, Steve has the same data and pinouts that you got from the Panasonic datasheet. Are you using the CD that came with the kit? I don't know where you have found the data that you mention.

So, you do have voltage problems at U5. Pin 2 should have about 0.34V and you have zero. I would check that all of the pins on U5 are soldered well and no bridges, and also check R11 to see that it is a 100k (104) and it is soldered properly. Check the polarity on C56, or see if it is shorted by something.

That's what I would do and you may well have done that. Get the right version of the manual and it will probably reduce the frustration level a bit. I know how disconcerting it can be to find (or think you find) major errors in the documentation when you are troubleshooting.

Good luck and keep us informed.

72
Stephen
VE7NSD

Jim Fraser wrote:
> Yes, the problem is identical on all bands. I am still confused about
> U5, the AGC chip AN6123MS. Steve lists the pins and voltages in the
> documentation as follows:
>
> Pin 1 - 1.3v Audio In
> Pin 2 - 0v GND
> Pin 3 - 5.0v V+
> Pin 4 - 0.34v Vagc
> Pin 5 - 0.96v Audio Out
>
> However, the data sheet for the AN6123MS device identifies the pins
> as follows:
>
> Pin 1 - Vcc
> Pin 2 - DET
> Pin 3 - Audio Input
> Pin 4 - GND
> Pin 5 - Audio Out
>
> That the pin functions do not match is confusing. The voltages I read
> are as follows:

>
> Pin 1 - 5.01v
> Pin 2 - 0v
> Pin 3 - 0.93v
> Pin 4 - 0v
> Pin 5 - 1.27v
>
> using the AN6123MS Pinout
>
> 3 4 5
> ---------------
> |
> |
> |
> |--------------
> 2 1
>
> Could someone with a functional Bee do a quick measurement of the
> voltages on this device and report the findings.
>
> Jim K6JF
>
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>
>
>

3226. Re: [AT_Sprint] Re: Calibration Reset

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-15 05:39:20 UTC
From: Stephen Wandling
Topic: 3211 Message: 3226

Carey,

While I wish that my junk box allowed me to whip up a VXO, it doesn't, but help is on the way. I ordered the FCC1 frequency counter a couple of weeks ago, and while it was working its way through the system, they issued the FCC2 Mk II, that I also ordered, which as you may know is their DDS VFO that bolts onto the FCC1.

So, I will have the stable oscillator married to the frequency counter, and they even specify calibrating it with the same zero beating on 10Mhz WWV as you do below. Then you get the FCC1 to read the 10Mhz oscillator, and adjust to get it as accurate as you can.

I'm upping the ante. I want my Bee to be +/- 9Hz!

Thanks for your suggestions.

72
Stephen
VE7NSD

radio_kx0r wrote:
> --- In AT_Sprint@yahoogroups.com, Stephen Wandling <swandling@...>
> wrote:
>
> Stephen,
>
> Here's a way to check your counter - crude but easy to do:
>
> If you have a fairly stable oscillator, or generator, warm it up for
> a while. Then listen with a receiver to WWV or another "standard"
> station, and tune your oscillator on top of it. You will need to
> adjust the relative level of your two signals so you can hear a good
> beat. Adjust your oscillator as close to zero beat as possible, and
> measure its frequency with your counter. You may be able to use an S-
> meter to get closer to zero beat if you have trouble hearing the
> softly varying beat sounds.
>
> If your counter is perfect, you should read out the frequency of the
> standard station. Any error will tell you how far off your counter
> is, and in which direction. This may enable you to figure out a
> correction factor. Even better, if your counter's reference
> oscillator is adjustable, you can correct it until your "transfer"
> oscillator reads correct when zero beat to the standard station.
>
> A good transfer oscillator is a VXO - variable crystal oscillator -

> running near 10.000000000 Mhz. 10 Mhz crystals are cheap and
> available, and a stable VXO would not be hard to build. I'm ashamed
> to admit that I need to build one of these for my shack.... If the
> VXO is done right, it becomes a convenient secondary standard.
> Similar devices are available on the Internet. Some use calibrated
> TCXO's.
>
> There are many variations on this theme. It should be possible to
> get within a few Hz, or closer, using the transfer oscillator and a
> corrected counter.
>
> I have confidence in the ATS calibration scheme - both my "A" and "B"
> came out about the same, according to my counter, which has a TCXO
> reference. My "A" will tune to 10.000000 Mhz, so I can play some
> games with WWV, a second receiver, etc. I think I'm within 20 Hz or
> so, but without a good transfer oscillator, I'm fudging.
>
> We're still waiting for someone with a really good counter to measure
> the drift of the ATS-3B and see how much it changes during a QSO,
> from cold start, etc.
>
> I have an old Heathkit counter that reads to 1 Hz, but I don't have
> any solid reason to believe it's any more stable than the "B" - maybe
> if I leave it on for a while I could rely on it. The transfer
> oscillator would settle that question also.
>
> You can see where this is going....
>
> Every oscillator and every crystal has error and drift. You can get
> control if you find a way to compare and adjust a low-drift
> oscillator to a standard station, so you have a nice convenient
> source right there in your shack.
>
> Remember that until recently, most of the small QRP rigs had
> relatively poor stability and accuracy. The DDS rigs represent a
> huge improvement. To do better you would need a TCXO reference
> oscillator. The ATS rigs are precision tools compared to what we
> have previously used. I have a hunch that even if you set an ATS to
> 10 Hz, it may not hold that accuracy over the range of common outdoor
> temperatures, like from 0 degrees F to 100 degrees F. I don't know -
> I haven't measured mine. I have access to an environmental chamber
> and a good counter, so I may run a test some day.
>
> It really doesn't matter. The ATS rigs do a great job. They
> actually run well from below zero F to at least 100 degrees F. To
> beat an ATS you need a much bigger rig and everything else that goes
> with that.
>
> Try for 10 Hz...
>

> 72/73
>
> Carey
> KX0R
>
>
>> Thanks Michael,
>>
>> Its good to hear that I can get to +/- 10 Hz!
>>
>> I do have a concern about the calibration of the FCC1, which I just
>> fired up and calibrated today. The zerobeat dip is very broad and
>>
> this
>
>> gives me some concern. I was using the FCC1's 250Khz output to
>>
> zerobeat
>
>> with WWV, as per instructions. I used AM mode to do this, as I do
>>
> not
>
>> hear any zerobeat with CW or SSB. This may be the root of my
>>
> problem?
>
>> 72
>> Stephen
>> VE7NSD
>>
>> Michael Harnage wrote:
>>
>>> Nothing else to do, you're doing it fine. I was trying
>>> to explain why the calibration resets the defaults
>>> for each calibration rather than "building" on what
>>> was already stored for the those constants.
>>>
>>> You should indeed be able to get closer than 130Hz.
>>> With Steve's firmware you should be able to get to +/-
>>> 10Hz.
>>>
>>> Remember that your calibration is only as good as your
>>> frequency source. Few of use have properly calibrated
>>> frequency counters and the best thing we have access
>>> to is WWV. Simple matter to put the WWV (10MHz of
>>> course) signal "on top" of the calibration signal from
>>> the ATS rig using a second receiver and a spectrum
>>> display as I describe on my website. If your ear is
>>> really good you can do this by zero beating the

>>> signals on the second receiver.
>>>
>>> Hope this is making some sense.
>>>
>>> -mike
>>>
>>>
>>> --- Stephen Wandling <swandling@...> wrote:
>>>
>>>
>>>
>>>
>>>> Your scary comment: "If the calibration was not
>>>> reset to the defaults
>>>> each time you entered cal mode", needs some
>>>> clarification, please. I
>>>> simply entered CF mode, noted that the frequency was
>>>> 80Hz to 90Hz high
>>>> and pressed the Tune Down to correct this and then
>>>> pressed Menu to
>>>> save. Is there something else I am supposed to do?
>>>> If so, what?
>>>>
>>>> I understand the granularity in the tuning, but I am
>>>> not clear why I
>>>> can't get the ATS to be closer to the displayed
>>>> frequency than 470Hz.
>>>> This is my biggest concern and I am unclear if you
>>>> addressed this.
>>>>
>>>>
>>>>
>>>
>>>
>>> ------------------------------------
>>>
>>> Yahoo! Groups Links
>>>
>>>
>>>
>>>
>>>
>>>
>>>
>
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>

>
>
>
>

3227. NAQCC Special mW Sprint Tuesday night!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-15 15:42:18 UTC
From: NAQCC
Topic: 3227 Message: 3227

NAQCC Special mW Sprint Tuesday night!
This coming Tuesday evening will be the Special NAQCC mW Sprint.

You must use 1 watt or less output power. Other stations can use any power.

I will refer you to the proper URL:

http://www.arm-tek.net/~yoel/sprint200806_special.html

There you will find all the details as to time, frequencies and also certificates for the winners.

This is a special event, for the month of June, that caters to the CW veteran, the CW newcomer, straight key and bug fans. All are welcome to participate; but you must use QRP/p power levels to compete for awards.

This is a good time for you to earn your NAQCC 1000 Miles Per Watt Award. Come join us and have a real good time!

73 de Dave VA3RJ
NAQCC #0004

3228. Re: Low Audio?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-15 23:13:21 UTC
From: Jim Fraser
Topic: 3168 Message: 3228

Stephen,

My manual copy is from the CD of the first run. Anyway I went by the assumption that Steve's chart is correct in which case I should be getting 0.34v at the Vagc pin whereas I have 0v.

I checked that the pin is not shrted to ground, OK. I pulled out C56 and checked that it is not shorted, OK. I confirmed that R11 is 100K, it is and it measures around 97K.

Since the other pin voltages are good, I can only conclude that the device is bad. I will email Steve with these findings and inquire about getting a replacement.

73, and thanks for your input.

Jim K6JF

3229. Run for the Bacon, 6/15/2008, 6:00 pm

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-16 00:42:02 UTC
From: AT_Sprint@yahoogroups.com
Topic: 3229 Message: 3229

Reminder from: AT_Sprint Yahoo! Group
http://groups.yahoo.com/group/AT_Sprint/cal

Run for the Bacon
Sunday June 15, 2008
6:00 pm - 8:00 pm
(This event repeats every month on the third Sunday.)
Location: Your shack or anywhere

Notes:
This Sunday evening, the Flying Pigs Amateur Radio Club International will be holding its monthly Run For The Bacon. This is a friendly, two hour QRP CW Sprint, which is open to ALL radio amateurs, will last from 9:00 - 11:00PM EDT (0200-0400 UTC Monday).

You may work stations once per band on 160, 80, 40, 20, 15 or 10 Meters. Suggested starting frequencies are 1.812, 3.562, 7.044, 14.062, 21.062, and 28.062 MHz.

The exchange is RST, S/P/C (State, Province, Country) and Flying Pigs membership number. If you're not a member of the Flying Pigs, and would like to be; then please cli

All Rights Reserved
Copyright ? 2008
Yahoo! Inc.
http://www.yahoo.com

Privacy Policy:
http://privacy.yahoo.com/privacy/us

Terms of Service:
http://docs.yahoo.com/info/terms/

3230. Yes, I'm back...

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-16 02:28:00 UTC
From: kd1jv
Topic: 3230 Message: 3230

Hi Gang, sorry it took me a while to check in after I got back from the hike. Other than a little chest cold the last week of the trip, it was great.

Since I got back, I finally discovered why my implentation of iambic B mode is so difficult to use. I'd been detecting the "both paddles closed" condition at the begining of a space between code elements. Turns out this is too soon. I have changed it to make the test at the end of a space and this works much better. Now there is much less chance of getting an extra element when you don't want one. I'll up load the new code with this chanage to the files section soon.

If any of you have one of the new PFR-3 rigs (which you might have noticed is basically an ATS rig on steriods)I made the same mistake there and have new firmware for the rig which I'd be happy to reprogam your MEGA48 with. (It also has some new features in it and fixes a couple of other minor bugs)

I do have some more ATS-3B's kitted up, but found I'm sort of some parts so will have to order them (tomorrow hopefully) to complete the run.

3231. 3 Bee for Sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-16 21:46:45 UTC
From: WA0ITP
Topic: 3231 Message: 3231

I've decided to sell my unbuilt 3B kit. It's unpacked except
for the processor which has been updated by Steve. I think
the reprogramming had to do with the error that occurred
when quickly turning it off and then back on quickly.

I'm very comfortable on portable ops with my great
performing 3, so I see the 3B as surplus to my needs.

Same as original price from Steve, $190 shipped in US.
Money Order preferred, but will take a check if you can
wait a coupla weeks for it to clear. First email gets it.

Thanx..

I love this radio stuff !
72, 73 Terry, WA?ITP
www.wa0dx.org/wa0itp
www.4sqrp.com
www.hams4u.com
www.qrpspots.com

3232. Problem using the Elecraft T1 tuner w/ the ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-17 01:20:26 UTC
From: laseraddict777
Topic: 3232 Message: 3232

Hi, everyone. Love using my Bee. It works fine w/ 50 ohm dipole, but bought the Elecraft t1 to be able to use it with long wire and shorter antenna lengths. The problem I have is every time I try using the tuner the "E" current overload light comes on on the Bee and there is not enough time for the tuner to tune. Has anyone else experienced this and figured out a solution? Thanks for any help!
Rick, WB#BIQ

3233. Re: [AT_Sprint] Problem using the Elecraft T1 tuner w/ the ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-17 01:30:08 UTC
From: Hank Greeb
Topic: 3232 Message: 3233

Use a 9 volt power source instead of 12 volts during tuneup.

laseraddict777 wrote:
> Hi, everyone. Love using my Bee. It works fine w/ 50 ohm dipole, but
> bought the Elecraft t1 to be able to use it with long wire and shorter
> antenna lengths. The problem I have is every time I try using the
> tuner the "E" current overload light comes on on the Bee and there is
> not enough time for the tuner to tune. Has anyone else experienced
> this and figured out a solution? Thanks for any help!
> Rick, WB#BIQ

3234. Re: [AT_Sprint] Problem using the Elecraft T1 tuner w/ the ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-17 01:33:57 UTC
From: Michael Harnage
Topic: 3232 Message: 3234

Try using a lower voltage power source to tune up
with.

Some have used a resistor in the power supply line to
limit current. (Removing it during operation).

-mike/w1mt

--- laseraddict777 <laseraddict777@...> wrote:

> Hi, everyone. Love using my Bee. It works fine w/ 50
> ohm dipole, but
> bought the Elecraft t1 to be able to use it with
> long wire and shorter
> antenna lengths. The problem I have is every time I
> try using the
> tuner the "E" current overload light comes on on the
> Bee and there is
> not enough time for the tuner to tune. Has anyone
> else experienced
> this and figured out a solution? Thanks for any
> help!
> Rick, WB#BIQ
>

3235. Re: [AT_Sprint] Problem using the Elecraft T1 tuner w/ the ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-17 01:40:40 UTC
From: Stephen Wandling
Topic: 3232 Message: 3235

Hi Rick,

I don't have a T1 ATU, but its my understanding that the Bee needs to see something pretty close to 50 ohms when its tuning; either a 50 ohm antenna or a Tayloe bridge type of circuit. I use a homebrew BLT, which has the Tayloe bridge, that I modified to cover 80M-20M and it works fine for long/short wires and my ladder line fed loop.

I don't know how you might interface with the T1, but QRP kits http://www.qrpkits.com/swrindicator.html sells a Tayloe kit. I'm sure others here might know. Carey, KX0R, on this list has lots of info on the BLT.

72
Stephen
VE7NSD

laseraddict777 wrote:
> Hi, everyone. Love using my Bee. It works fine w/ 50 ohm dipole, but
> bought the Elecraft t1 to be able to use it with long wire and shorter
> antenna lengths. The problem I have is every time I try using the
> tuner the "E" current overload light comes on on the Bee and there is
> not enough time for the tuner to tune. Has anyone else experienced
> this and figured out a solution? Thanks for any help!
> Rick, WB#BIQ
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>
>
>

3236. RE: [AT_Sprint] Yes, I'm back...

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-17 02:37:20 UTC
From: Ken Lotts
Topic: 3230 Message: 3236

Looking forward to the new code...
Thanks!

-----Original Message-----
From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com]On Behalf Of kd1jv
Sent: Sunday, June 15, 2008 7:28 PM
To: AT_Sprint@yahoogroups.com
Subject: [AT_Sprint] Yes, I'm back...

Hi Gang, sorry it took me a while to check in after I got back from the hike. Other than a little chest cold the last week of the trip, it was great.

Since I got back, I finally discovered why my implentation of iambic B mode is so difficult to use. I'd been detecting the "both paddles closed" condition at the begining of a space between code elements. Turns out this is too soon. I have changed it to make the test at the end of a space and this works much better. Now there is much less chance of getting an extra element when you don't want one. I'll up load the new code with this chanage to the files section soon.

If any of you have one of the new PFR-3 rigs (which you might have noticed is basically an ATS rig on steriods)I made the same mistake there and have new firmware for the rig which I'd be happy to reprogam your MEGA48 with. (It also has some new features in it and fixes a couple of other minor bugs)

I do have some more ATS-3B's kitted up, but found I'm sort of some parts so will have to order them (tomorrow hopefully) to complete the run.

3237. Re:Re: [AT_Sprint] Problem usin g the Elecraft T1 tuner w/ the ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-17 02:37:55 UTC
From: J. Haynes
Topic: 3237 Message: 3237

Howdy Stephenson,
May I ask how you modded your BLT for 80?
Jonathan KC7FYS

3238. Re: Problem using the Elecraft T1 tuner w/ the ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-17 02:55:29 UTC
From: km5ty
Topic: 3232 Message: 3238

I use a T1 Elecraft tuner with my 3B and for portable ops I needed a way to reduce the VSWR the 3B sees while the T1 tunes. I wasn't terribly interested in carrying another power source, so I built a 6dB attenuator. These can easily be built with three resistors. I used a pi network.

It works fairly well, although if I had it to do over I'd use a 10dB pad. The general idea here is that the 3B will see a 10dB return loss, but the tuner will still have enough power to get a proper tune. Once the VSWR after the T1 is low, remove the pad from the 3B antenna port and have fun.

See here for an attenuator calculator:
http://www.microwaves101.com/encyclopedia/calcattenuator.cfm

I used one male BNC and one female BNC to make it easy to put it in line. Make sure you use high power resistors, I used 3 or 4Watters (duty cycle matters).

Cheers,

Gary KM5TY

--- In AT_Sprint@yahoogroups.com, Stephen Wandling <swandling@...> wrote:
>
> Hi Rick,
>
> I don't have a T1 ATU, but its my understanding that the Bee needs to
> see something pretty close to 50 ohms when its tuning; either a 50 ohm
> antenna or a Tayloe bridge type of circuit. I use a homebrew BLT, which
> has the Tayloe bridge, that I modified to cover 80M-20M and it works
> fine for long/short wires and my ladder line fed loop.
>
> I don't know how you might interface with the T1, but QRP kits
> http://www.qrpkits.com/swrindicator.html sells a Tayloe kit. I'm sure
> others here might know. Carey, KX0R, on this list has lots of info on
> the BLT.
>
> 72
> Stephen
> VE7NSD
>
> laseraddict777 wrote:
> > Hi, everyone. Love using my Bee. It works fine w/ 50 ohm dipole, but
> > bought the Elecraft t1 to be able to use it with long wire and shorter
> > antenna lengths. The problem I have is every time I try using the
> > tuner the "E" current overload light comes on on the Bee and there is
> > not enough time for the tuner to tune. Has anyone else experienced
> > this and figured out a solution? Thanks for any help!

> > Rick, WB#BIQ
> >
> >
> > ----------
> >
> > Yahoo! Groups Links
> >
> >
> >
> >
> >
>

3239. Re: [AT_Sprint] Problem using the Elecraft T1 tuner w/ the ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-17 03:40:14 UTC
From: Stephen Wandling
Topic: 3237 Message: 3239

Hi Jonathan,

Well, you probably don't want to do it the way I did. First I read
Carey's info on mods for the BLT www.qrpkits.com/files/*KX0R*_*BLT*_Mod.pdf

Then I simply doubled the original number of turns on the coil and
links. This is not what Carey recommends and I can't remember why I did
it. So, then I peeled off a few turns at a time and got it to tune 20,
but not 80. Finally I added a SPST switch and switched in 250pF for 80.
It isn't what you'd call engineered, but it works.

72
Stephen
VE7NSD

J. Haynes wrote:
> Howdy Stephen,
> May I ask how you modded your BLT for 80?
> Jonathan KC7FYS
>
>

3240. Re:Re: [AT_Sprint] Problem usin g the Elecraft T1 tuner w/ the ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-17 07:40:11 UTC
From: J. Haynes
Topic: 3237 Message: 3240

Is that a molded inductor, or did you wind up that 250uf yourself? Heck, I might as well do that, too. I've got some cores and a meter.
Jonathan

3241. Re:Re: [AT_Sprint] Problem usin g the Elecraft T1 tuner w/ the ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-17 07:42:08 UTC
From: J. Haynes
Topic: 3237 Message: 3241

250pF, I meant.

3242. Need a tip on a resistor assortment.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-17 13:05:33 UTC
From: kc7fys
Topic: 3242 Message: 3242

Although I live next to electronic mecca Akihabara, I have a friend coming over to Japan from the US in a couple weeks and I want him to bring along a resistor assortment. I have picked up the nifty Norcal Capacitor box, and need to kind of lay the foundation for tinkering with a resistor kit. I suppose I only need 1/4 watt axial components for your garden-variety QRP tinkering. Could somebody shoot me a good link for something in the 20$ range that gives the most good components? I see lots on ebay and elsewhere, but can't tell the mediocre deals from the good. A few hard-to-find, maybe a few 1/2 watt, or whatever would be nice. I'm building a good basic junkbox here...
Thanks for any off/onlist responses.
Jonathan KC7FYS/7J1AWL

3243. Re: Yes, I'm back...

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-17 13:53:52 UTC
From: radio_kx0r
Topic: 3230 Message: 3243

--- In AT_Sprint@yahoogroups.com, "kd1jv" <kd1jv@...> wrote:

Steve,

Welcome back!

Wonder if your changes in timing affect Mode A?

72,

Carey
KX0R

> Hi Gang, sorry it took me a while to check in after I got back from
> the hike. Other than a little chest cold the last week of the trip,
> it was great.
>
> Since I got back, I finally discovered why my implentation of
iambic
> B mode is so difficult to use. I'd been detecting the "both paddles
> closed" condition at the begining of a space between code elements.
> Turns out this is too soon. I have changed it to make the test at
the
> end of a space and this works much better. Now there is much less
> chance of getting an extra element when you don't want one. I'll up
> load the new code with this chanage to the files section soon.
>
> If any of you have one of the new PFR-3 rigs (which you might have
> noticed is basically an ATS rig on steriods)I made the same mistake
> there and have new firmware for the rig which I'd be happy to
> reprogam your MEGA48 with. (It also has some new features in it and
> fixes a couple of other minor bugs)
>
> I do have some more ATS-3B's kitted up, but found I'm sort of some
> parts so will have to order them (tomorrow hopefully) to complete
the
> run.
>

3244. Re: Yes, I'm back...

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-17 14:01:44 UTC
From: radio_kx0r
Topic: 3230 Message: 3244

--- In AT_Sprint@yahoogroups.com, "kd1jv" <kd1jv@...> wrote:

Steve,

Several of us noticed that you chose the BS170 mosfets for the finals
in the PFR-3. These replace the 2N7000's in the ATS rigs.

Please comment on whether the BS170's would be an improvement in
either the ATS-3A or ATS-3B. How do the devices differ in this
application?

The data sheets are very similar. It appears that the BS170's have
more capacitance and better thermal properties - suggests a larger
die. Wonder if they're harder to drive on the higher freq's - must
be some tradeoffs.

72/73

Carey
KX0R

> Hi Gang, sorry it took me a while to check in after I got back from
> the hike. Other than a little chest cold the last week of the trip,
> it was great.
>
> Since I got back, I finally discovered why my implentation of
iambic
> B mode is so difficult to use. I'd been detecting the "both paddles
> closed" condition at the begining of a space between code elements.
> Turns out this is too soon. I have changed it to make the test at
the
> end of a space and this works much better. Now there is much less
> chance of getting an extra element when you don't want one. I'll up
> load the new code with this chanage to the files section soon.
>
> If any of you have one of the new PFR-3 rigs (which you might have
> noticed is basically an ATS rig on steriods)I made the same mistake
> there and have new firmware for the rig which I'd be happy to
> reprogam your MEGA48 with. (It also has some new features in it and
> fixes a couple of other minor bugs)
>
> I do have some more ATS-3B's kitted up, but found I'm sort of some
> parts so will have to order them (tomorrow hopefully) to complete
the
> run.
>

3245. Three Bee Sold

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-17 14:46:29 UTC
From: WA0ITP
Topic: 3245 Message: 3245

Thanx to all who responded. The 3B is going to a fine home
in New Jersey.

I love this radio stuff !
72, 73 Terry, WA?ITP
www.wa0dx.org/wa0itp
www.4sqrp.com
www.hams4u.com
www.qrpspots.com

3246. DFE while in straight key mode

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-17 15:07:55 UTC
From: w1mt
Topic: 3246 Message: 3246

There was some interest a while back in being able to do direct frequency entry while in straight key mode. This handy for those who may be using an external keyer or computer to do the keying. My latest version just posted this morning on my website allows this capability (3B only at this time). I have moved the button paddle mode dit/dah to tunedown/tuneup. Now all one has to do while in SK mode is to double click the vfo button (enter button paddle mode) then click menu+vfo to enter DFE and use the tuneup/tunedown buttons to enter a frequency. Double click to the vfo button to exit button paddle mode when you are done.

Also, improved the keying. It now acts more like the Curtis keyer (mode B) and Accukeyer (mode A).

Also, improved the accuracy of the battery voltage readout. It now annunciates the battery voltage (before the diode) and is accurate to within 5/100 volt according to my DVM. YMMV, according to the tolerances of R45/R46.

Many thanks to Milan Stejskal/OK1IF and Dave Mertz/WA3OFF for their help!!!

Enjoy,
mike/w1mt

3247. Re: [AT_Sprint] Problem using the Elecraft T1 tuner w/ the ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-17 16:05:10 UTC
From: Stephen Wandling
Topic: 3237 Message: 3247

Hi Jonathan,

It was a 250pF ceramic NPO capacitor. I had purchased a bag of assorted NPOs from New England QRP for cheap. I imagine that they still sell them. I just tried a few until it tuned 80M properly.

72
Stephen
VE7NSD

J. Haynes wrote:
> Is that a molded inductor, or did you wind up that 250uf yourself? Heck, I might as well do that, too. I've got some cores and a meter.
> Jonathan
>
>

3248. Re: Problem using the Elecraft T1 tuner w/ the ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-17 16:29:15 UTC
From: laseraddict777
Topic: 3232 Message: 3248

Gary,

Thanks for your reply. The Pi-Bridge Attenuator looks interesting.
Will calculate it for 10 db, get the resistors and give it a shot.
Thanks again.
Rick, WB3BIQ

In AT_Sprint@yahoogroups.com, "km5ty" <km5ty@...> wrote:
>
> I use a T1 Elecraft tuner with my 3B and for portable ops I needed a
way to reduce the
> VSWR the 3B sees while the T1 tunes. I wasn't terribly interested
in carrying another
> power source, so I built a 6dB attenuator. These can easily be
built with three resistors.
> I used a pi network.
>
> It works fairly well, although if I had it to do over I'd use a 10dB
pad. The general idea
> here is that the 3B will see a 10dB return loss, but the tuner will
still have enough power
> to get a proper tune. Once the VSWR after the T1 is low, remove the
pad from the 3B
> antenna port and have fun.
>
> See here for an attenuator calculator:
> http://www.microwaves101.com/encyclopedia/calcattenuator.cfm
>
> I used one male BNC and one female BNC to make it easy to put it in
line. Make sure you
> use high power resistors, I used 3 or 4Watters (duty cycle matters).
>
> Cheers,
>
> Gary KM5TY
>
>
> --- In AT_Sprint@yahoogroups.com, Stephen Wandling <swandling@> wrote:
> >
> > Hi Rick,
> >
> > I don't have a T1 ATU, but its my understanding that the Bee needs to
> > see something pretty close to 50 ohms when its tuning; either a 50

ohm
> > antenna or a Tayloe bridge type of circuit. I use a homebrew BLT,
which
> > has the Tayloe bridge, that I modified to cover 80M-20M and it works
> > fine for long/short wires and my ladder line fed loop.
> >
> > I don't know how you might interface with the T1, but QRP kits
> > http://www.qrpkits.com/swrindicator.html sells a Tayloe kit. I'm
sure
> > others here might know. Carey, KX0R, on this list has lots of
info on
> > the BLT.
> >
> > 72
> > Stephen
> > VE7NSD
> >
> > laseraddict777 wrote:
> > > Hi, everyone. Love using my Bee. It works fine w/ 50 ohm dipole, but
> > > bought the Elecraft t1 to be able to use it with long wire and
shorter
> > > antenna lengths. The problem I have is every time I try using the
> > > tuner the "E" current overload light comes on on the Bee and
there is
> > > not enough time for the tuner to tune. Has anyone else experienced
> > > this and figured out a solution? Thanks for any help!
> > > Rick, WB#BIQ
> > >
> > >
> > > ------------------------------------
> > >
> > > Yahoo! Groups Links
> > >
> > >
> > >
> > >
> > >
> > >
> >
>

3249. Re: [AT_Sprint] DFE while in straight key mode

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-17 17:27:48 UTC
From: Stephen Wandling
Topic: 3246 Message: 3249

Mike,

Thanks a lot for this. I knew it would be useful to part time SK guys like myself, but hadn't thought about external keyers or computer keying.

I presume the SPLIT button now called the VFO button? I've only joined this group fairly recently and often feel like I need to read something like "The History of the ATS Rig" or some such article, to get caught up. I search the old messages, but its hard to sort everything out that way.

I've put the June 2006 and June 2008 'cheatsheets' side by side in Excel to see what changes have been made and there seems to be many more than what you mention here. Were there other issues of the firmware in between these two dates? I have the 'stock' firmware that came with my ATS3-B (most recent kits), so its obvious that a lot of changes have been made. Right now its all a bit confusing to know whats been added or removed or re-named or moved or changed. :-)

Thanks again for all of your work to make this great little rig even better.

72
Stephen
VE7NSD

w1mt wrote:
> There was some interest a while back in being able to do direct
> frequency entry while in straight key mode. This handy for those who
> may be using an external keyer or computer to do the keying. My
> latest version just posted this morning on my website allows this
> capability (3B only at this time). I have moved the button paddle
> mode dit/dah to tunedown/tuneup. Now all one has to do while in SK
> mode is to double click the vfo button (enter button paddle mode)
> then click menu+vfo to enter DFE and use the tuneup/tunedown buttons
> to enter a frequency. Double click to the vfo button to exit button
> paddle mode when you are done.
>
> Also, improved the keying. It now acts more like the Curtis keyer
> (mode B) and Accukeyer (mode A).
>
> Also, improved the accuracy of the battery voltage readout. It now
> annunciates the battery voltage (before the diode) and is accurate to
> within 5/100 volt according to my DVM. YMMV, according to the
> tolerances of R45/R46.
>
> Many thanks to Milan Stejskal/OK1IF and Dave Mertz/WA3OFF for their

> help!!!
>
> Enjoy,
> mike/w1mt
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>
>
>

3250. Re: [AT_Sprint] Need a tip on a resistor assortment.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-17 18:07:10 UTC
From: Vojtěch Bubník
Topic: 3242 Message: 3250

Radioshack has a nice assortment of 500 carbon 1/4W 5% resistors for about $15. Good deal indeed.
Vojtech OK1IAK, AB2ZA

> ------------ Původní zpráva ------------
> Od: kc7fys <kc7fys@...>
> Předmět: [AT_Sprint] Need a tip on a resistor assortment.
> Datum: 17.6.2008 15:05:43
> --
> Although I live next to electronic mecca Akihabara, I have a friend
> coming over to Japan from the US in a couple weeks and I want him to
> bring along a resistor assortment. I have picked up the nifty Norcal
> Capacitor box, and need to kind of lay the foundation for tinkering
> with a resistor kit. I suppose I only need 1/4 watt axial components
> for your garden-variety QRP tinkering. Could somebody shoot me a good
> link for something in the 20$ range that gives the most good
> components? I see lots on ebay and elsewhere, but can't tell the
> mediocre deals from the good. A few hard-to-find, maybe a few 1/2
> watt, or whatever would be nice. I'm building a good basic junkbox here...
> Thanks for any off/onlist responses.
> Jonathan KC7FYS/7J1AWL
>
>
>
>

3251. Re: DFE while in straight key mode

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-17 18:44:31 UTC
From: w1mt
Topic: 3246 Message: 3251

Well, hmmm, uhhhh, where to start...

I have always called the second button "vfo", because it seems to fit better with my firmware functionality. Switching between two virtual vfo's in the firmware, seems to lend itself to calling the button "vfo". Internally in the code, it is called split.

As far as changes from 2006 to 2008. Only the menu'ing has changed significantly. The underlying functionality is still the same. Except of course for the recently added items.

My intent is to eventually go back and upgrade my ats2/3/3a code to include everything that can be included from the 3b. Absent, of course, will be things like battery voltage and led's..... but certainly to include updated menu'ing, keying upgrade, and dfe while in sk mode. I'm in no hurry to do that though, since I only have a ATS3 (along with my 3B) still in house and I am more of a single paddle coder, so iambic modes don't affect my sending. :)

There should be no issues from 06 to now, other than the keying. Most everything else is additions or mods to how things are accessed. I don't know what exactly Steve is doing in his firmware to change the keying. Will be interesting to see if it is similiar to what I did.

I have learned more about how a radio works and about the MSP430 processors than I ever could have in a classroom by tinkering with these wonderful little rigs. I am grateful that Steve has allowed others to develop code for his ATS rigs.

-mike/w1mt

--- In AT_Sprint@yahoogroups.com, Stephen Wandling <swandling@...> wrote:
>
> Mike,
>
> Thanks a lot for this. I knew it would be useful to part time SK guys
> like myself, but hadn't thought about external keyers or computer keying.
>
> I presume the SPLIT button now called the VFO button? I've only joined
> this group fairly recently and often feel like I need to read something
> like "The History of the ATS Rig" or some such article, to get caught

> up. I search the old messages, but its hard to sort everything out
that
> way.
>
> I've put the June 2006 and June 2008 'cheatsheets' side by side in
Excel
> to see what changes have been made and there seems to be many more
than
> what you mention here. Were there other issues of the firmware in
> between these two dates? I have the 'stock' firmware that came
with my
> ATS3-B (most recent kits), so its obvious that a lot of changes
have
> been made. Right now its all a bit confusing to know whats been
added
> or removed or re-named or moved or changed. :-)
>
> Thanks again for all of your work to make this great little rig
even better.
>
> 72
> Stephen
> VE7NSD
>

3252. Re: Problem using the Elecraft T1 tuner w/ the ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-17 18:47:55 UTC
From: laseraddict777
Topic: 3232 Message: 3252

Stephen, thanks for your reply and in the info on the Tayloe bridge circuit by qrpkits. That looks interesting and will keep that as a possibility. 72's, Tnx again, Rick, WB3BIQ

In AT_Sprint@yahoogroups.com, Stephen Wandling <swandling@...> wrote:

> Hi Rick,
>
> I don't have a T1 ATU, but its my understanding that the Bee needs to
> see something pretty close to 50 ohms when its tuning; either a 50 ohm
> antenna or a Tayloe bridge type of circuit. I use a homebrew BLT, which
> has the Tayloe bridge, that I modified to cover 80M-20M and it works
> fine for long/short wires and my ladder line fed loop.
>
> I don't know how you might interface with the T1, but QRP kits
> http://www.qrpkits.com/swrindicator.html sells a Tayloe kit. I'm sure
> others here might know. Carey, KX0R, on this list has lots of info on
> the BLT.
>
> 72
> Stephen
> VE7NSD
>
> laseraddict777 wrote:
> > Hi, everyone. Love using my Bee. It works fine w/ 50 ohm dipole, but
> > bought the Elecraft t1 to be able to use it with long wire and shorter
> > antenna lengths. The problem I have is every time I try using the
> > tuner the "E" current overload light comes on on the Bee and there is
> > not enough time for the tuner to tune. Has anyone else experienced
> > this and figured out a solution? Thanks for any help!
> > Rick, WB#BIQ
> >
> >
> > ------------------------------------
> >
> > Yahoo! Groups Links
> >
> >
> >
> >
> >
> >
>

3253. BS-170's?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-17 23:04:53 UTC
From: kd1jv
Topic: 3230 Message: 3253

--- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@...> wrote:

> Several of us noticed that you choose the BS170 mosfets for the
finals
> in the PFR-3. These replace the 2N7000's in the ATS rigs.
>
I haven't tried them in an ATS rig yet, but they should work fine. Just remember the Source and Drain pins are reversed from the 2N7000's. Some tweaking of the filter might be required. Using values from the Bee filter, I was getting 6-7 watts out at 12 V! Had to tone that down some for safety sake. Since Doug wanted the PFR to run on 12 volts and put out 5 watts, I figured the somewhat more robust BS170's would be a good idea. So far, I don't think anyone has blown them up yet :-)

3254. Re: Yes, I'm back...

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-17 23:06:51 UTC
From: kd1jv
Topic: 3230 Message: 3254

>
> Wonder if your changes in timing affect Mode A?
>
No, that remains the same. Don't know if A mode can or should work any
differently than it does now.

3255. Re: [AT_Sprint] BS-170's?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-18 00:52:44 UTC
From: Vojtěch Bubník
Topic: 3230 Message: 3255

Actually I am using BS170s in my ATS-3a after I blew the 2n7000 once.
I did not do any additional change on my TRX and I did not measure anything either.
It just works :-)
73, Vojtech OK1IAK, AB2ZA

3256. Re: Yes, I'm back...

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-19 15:27:28 UTC
From: eplerkeppler
Topic: 3230 Message: 3256

One other thing Steve,

Is this just a matter concerning ATS rigs?

I just got a few SKC chipsets and am wondering if they would need new coding or does their Iambic B mode work fine for them?

-- Charles
WC5MC

--- In AT_Sprint@yahoogroups.com, "kd1jv" <kd1jv@...> wrote:
>
> ...
> Since I got back, I finally discovered why my implentation of iambic
> B mode is so difficult to use. I'd been detecting the "both paddles
> closed" condition at the begining of a space between code elements.
> Turns out this is too soon. I have changed it to make the test at the
> end of a space and this works much better. Now there is much less
> chance of getting an extra element when you don't want one. I'll up
> load the new code with this chanage to the files section soon.
>
> ...

3257. Help! Where to connect QBSA to ATS-3B?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-19 21:00:17 UTC
From: mpupeza
Topic: 3257 Message: 3257

Hi;
I'm a bit confused as to where I can connect my newly aquired QBSA
(Thanks, Doug!) frequency input to my ATS-3B.
My manuals, maybe older?, don't show where the best spot is.
I assume that a 10 pf cap will do, as I couldn't find a 4.7?
Where's that sweet spot?
Thanks.
Mike VE3EQP.....>

3258. Re: [AT_Sprint] Help! Where to connect QBSA to ATS-3B?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-19 22:36:58 UTC
From: Stephen Wandling
Topic: 3257 Message: 3258

Hi Mike,

I don't have a QBSA, but will be homebrewing something similar and I had the same question you have. It seems from the text that it goes at the LO output point. In the picture in my QBSA manual, Steve seems to have attached the 4.7pF to the right side of L1, probably because it has a big pad and space for another connection.

My guess is that the 10pF would be OK, but that's only a guess.

Hope this helps.

72
Stephen
VE7NSD

mpupeza wrote:
> Hi;
> I'm a bit confused as to where I can connect my newly aquired QBSA
> (Thanks, Doug!) frequency input to my ATS-3B.
> My manuals, maybe older?, don't show where the best spot is.
> I assume that a 10 pf cap will do, as I couldn't find a 4.7?
> Where's that sweet spot?
> Thanks.
> Mike VE3EQP.....>
>
>
>
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>
>
>
>

3259. Re: [AT_Sprint] Help! Where to connect QBSA to ATS-3B?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-19 22:47:39 UTC
From: Michael Harnage
Topic: 3257 Message: 3259

< http://groups.yahoo.com/group/AT_Sprint/message/608
>

The cap may be labelled different for the 3b but the
idea is the same and should work FB. I like it for the
same reasons that Bruce mentions.

-mike

--- mpupeza <mpupeza@...> wrote:

> Hi;
> I'm a bit confused as to where I can connect my
> newly aquired QBSA
> (Thanks, Doug!) frequency input to my ATS-3B.

3260. Re: Help! Where to connect QBSA to ATS-3B?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-20 01:51:20 UTC
From: mpupeza
Topic: 3257 Message: 3260

OK Gang;
I'm going to try the pin 20 of the DDS.
If I have problems with that, I'll go to the 2nd inductor output of the filter, through the pin 19 LO chain.
Hope it works.
I remember making the NorCal Cascade with the digital readout that was great in RX, but went blank/squirrely during TX.
But, hey, is for the FUN!
73 es TNX to the responders!
Mike VE3EQP.....>

--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:
>
> < http://groups.yahoo.com/group/AT_Sprint/message/608
> >
>
> The cap may be labelled different for the 3b but the
> idea is the same and should work FB. I like it for the
> same reasons that Bruce mentions.
>
> -mike
>
> --- mpupeza <mpupeza@...> wrote:
>
> > Hi;
> > I'm a bit confused as to where I can connect my
> > newly aquired QBSA
> > (Thanks, Doug!) frequency input to my ATS-3B.
>

3261. Re: Help! Where to connect QBSA to ATS-3B?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-20 03:10:11 UTC
From: radio_kx0r
Topic: 3257 Message: 3261

--- In AT_Sprint@yahoogroups.com, "mpupeza" <mpupeza@...> wrote:

Mike,

If you want trouble-free operation of your QBSA with no degradation of your ATS rig, on all bands, please connect to the ungrounded end of either R16 or C28. This is the signal from PIN 20 of the DDS, which is called IOUTB.

Note that the designation for C28 is what's on the PC board as well as the REVISED schematic dated 9/15/07. Some of the earlier schematics in the manuals had different designators that did not match the PCB, and everyone should use the REVISED schematic with the updated designators so we can be on the same page.

C37 is the same cap, as called out incorrectly on the old schematics.

You should avoid loading the other DDS output, Pin 19, IOUT. It's much easier to solder to the resistor or the cap than to the DDS. Use a short piece of tiny coax to go from the IOUTB point to your connector.

My coupling cap is 4.7 pf. I use 18 inches of small teflon coax to feed my QBSA. I used a micro-size phone jack on my ATS rigs for the connection, but you might choose any other small connector that's convenient and different from the other connectors. I have the same setup on my ATS-3A and ATS-3B, and they both work fine with the QBSA. I'm guessing that 10 pf is OK for IOUTB.

Steve did a firmware improvement for the QBSA that fixed some problems with the displayed numbers. You can find info about that by searching this site.

I'd also suggest getting a piece of real red plastic to mount in front of the display - it will look much better than the orange film.

I think there are photos of the QBSA LO connection on this site in the PHOTOS section - someone posted that.

Remember that the QBSA introduces another level of error into the frequency measurement problem, so don't expect lab accuracy on every band. Do the cal a couple of times carefully, and you may get within 100 Hz most of the time.

72

Carey
KX0R

> OK Gang;
> I'm going to try the pin 20 of the DDS.
> If I have problems with that, I'll go to the 2nd inductor output of
> the filter, through the pin 19 LO chain.
> Hope it works.
> I remember making the NorCal Cascade with the digital readout that
> was great in RX, but went blank/squirrely during TX.
> But, hey, is for the FUN!
> 73 es TNX to the responders!
> Mike VE3EQP.....>
>
> --- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@> wrote:
> >
> > < http://groups.yahoo.com/group/AT_Sprint/message/608
> > >
> >
> > The cap may be labelled different for the 3b but the
> > idea is the same and should work FB. I like it for the
> > same reasons that Bruce mentions.
> >
> > -mike
> >
> > --- mpupeza <mpupeza@> wrote:
> >
> > > Hi;
> > > I'm a bit confused as to where I can connect my
> > > newly aquired QBSA
> > > (Thanks, Doug!) frequency input to my ATS-3B.
> >
>

3262. Re: Help! Where to connect QBSA to ATS-3B?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-20 03:32:52 UTC
From: radio_kx0r
Topic: 3257 Message: 3262

--- In AT_Sprint@yahoogroups.com, "mpupeza" <mpupeza@...> wrote:

Mike,

I just found the photo that N1RX has showing the connection to the IOUTB signal for the QBSA LO signal. Just look in N1RX's photos on this site, and you'll see how he did it. He used a disc ceramic cap and RG174 coax.

I suggest small teflon coax and a leaded 4.7 pf MC cap. If you need a piece of the coax, just send me a SASE.

72,

Carey
KX0R

> Hi;
> I'm a bit confused as to where I can connect my newly aquired QBSA
> (Thanks, Doug!) frequency input to my ATS-3B.
> My manuals, maybe older?, don't show where the best spot is.
> I assume that a 10 pf cap will do, as I couldn't find a 4.7?
> Where's that sweet spot?
> Thanks.
> Mike VE3EQP.....>
>

3263. Help ---- Ats3b part issue

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-20 04:48:28 UTC
From: Garry
Topic: 3263 Message: 3263

I finally got back to the build of my 3b and started the install of the semiconductor devices. Murphey nailed me in short order. OOps, 1 part short! I cannot locate the 74LVC1G3157 (U4). I don't know if I lost it or it was missed while packaging but that's not my concern here I will try to pick one up locally but I am almost dead certain it will have to be ordered and I am not sure what package I need. Can anyone help me here and tell me what package is needed to fit the board? I'm pretty certain that anything larger won't work and I don't even know if it's possible to get one that is smaller.

I searched through the manual but if its there, I missed the parts list and the package type. I got the component off the schematic

Bummer, I was hoping to have it ready for field day but I guess it's not going to happen now.

Thanks and 72

Garry/Ve7ajj

3264. Re: [AT_Sprint] Help ---- Ats3b part issue

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-20 05:03:52 UTC
From: Stephen Wandling
Topic: 3263 Message: 3264

Hi Garry,

Well, well, well. He's alive and well. Good to see you working on the Bee Garry. Sorry I can't ship you the U4. Its the same length as U5, but a smidgen wider and has 6 pins where the U5 has 5. I don't know the technical designation for that case size.

Steve's back so he can ship you one. It would probably be faster than ordering one and the price would be much better. :-)

If you have yours done by FD, I will have mine at FD here. Maybe a Bee to Bee chat?

72
Stephen
VE7NSD

Garry wrote:
> I finally got back to the build of my 3b and started the install of
> the semiconductor devices. Murphey nailed me in short order. OOps,
> 1 part short! I cannot locate the 74LVC1G3157 (U4). I don't know
> if I lost it or it was missed while packaging but that's not my
> concern here I will try to pick one up locally but I am almost dead
> certain it will have to be ordered and I am not sure what package I
> need. Can anyone help me here and tell me what package is needed to
> fit the board? I'm pretty certain that anything larger won't work
> and I don't even know if it's possible to get one that is smaller.
>
> I searched through the manual but if its there, I missed the parts
> list and the package type. I got the component off the schematic
>
> Bummer, I was hoping to have it ready for field day but I guess it's
> not going to happen now.
>
> Thanks and 72
>
> Garry/Ve7ajj
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>
>

>

3265. Re: Help ---- Ats3b part issue

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-20 05:34:33 UTC
From: Garry
Topic: 3263 Message: 3265

--- In AT_Sprint@yahoogroups.com, Stephen Wandling <swandling@...>
wrote:
Hi Stephen. Good to hear from you. I am afraid I have not been on
the group lately. The K3 build and learning curve took me away and
occupied the majority of my disposible ham radio time. I thought
Steve was out on a summer long hike so I suppose I might have read a
few posts prior to making mine but I didn't as you see. A Bee to Bee
chat would please me but by now you can probably run circles around
my CW skills HI.

I havn't been on the paddles for a while. I think all it would take
is getting that Bee up and running to turn my head back to CW. In
spite of the horrible band conditions I still hear some decent
signals from time to time.

I'll drop Steve a private email and see what can be done. I guess I
can get the rest together and then there is all of the band boards so
it's not like I have to leave it sit. I did pick up an altoids tin
today with a nice blue paint job.

I can use my ft-897 if need be but I will need a much larger battery
than I would for the Bee.

72.

Garry/Ve7ajj

>
> Hi Garry,
>
> Well, well, well. He's alive and well. Good to see you working
on the
> Bee Garry. Sorry I can't ship you the U4. Its the same length as
U5,
> but a smidgen wider and has 6 pins where the U5 has 5. I don't
know the
> technical designation for that case size.
>
>
> Steve's back so he can ship you one. It would probably be faster
than
> ordering one and the price would be much better. :-)
>
> If you have yours done by FD, I will have mine at FD here. Maybe
a Bee
> to Bee chat?

>
> 72
> Stephen
> VE7NSD
>
>
>
> Garry wrote:
> > I finally got back to the build of my 3b and started the install
of
> > the semiconductor devices. Murphey nailed me in short order.
OOps,
> > 1 part short! I cannot locate the 74LVC1G3157 (U4). I don't
know
> > if I lost it or it was missed while packaging but that's not my
> > concern here I will try to pick one up locally but I am almost
dead
> > certain it will have to be ordered and I am not sure what
package I
> > need. Can anyone help me here and tell me what package is
needed to
> > fit the board? I'm pretty certain that anything larger won't
work
> > and I don't even know if it's possible to get one that is
smaller.
> >
> > I searched through the manual but if its there, I missed the
parts
> > list and the package type. I got the component off the schematic
> >
> > Bummer, I was hoping to have it ready for field day but I guess
it's
> > not going to happen now.
> >
> > Thanks and 72
> >
> > Garry/Ve7ajj
> >
> >
> > ------------------------------------
> >
> > Yahoo! Groups Links
> >
> >
> >
> >
> >
> >
>

3266. Re: Help ---- Ats3b part issue

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-20 17:45:47 UTC
From: Jim Fraser
Topic: 3263 Message: 3266

The parts list is on Page 14 of the 3B manual:

74LVC1G3157 "CC5R" SOT-6

Looks like it is an SOT-6 package.

Jim K6JF

--- In AT_Sprint@yahoogroups.com, "Garry" <ve7ajj@...> wrote:
>
> I finally got back to the build of my 3b and started the install of
> the semiconductor devices. Murphey nailed me in short order.
OOps,
> 1 part short! I cannot locate the 74LVC1G3157 (U4). I don't know
> if I lost it or it was missed while packaging but that's not my
> concern here I will try to pick one up locally but I am almost
dead
> certain it will have to be ordered and I am not sure what package I
> need. Can anyone help me here and tell me what package is needed
to
> fit the board? I'm pretty certain that anything larger won't work
> and I don't even know if it's possible to get one that is smaller.
>
> I searched through the manual but if its there, I missed the parts
> list and the package type. I got the component off the schematic
>
> Bummer, I was hoping to have it ready for field day but I guess
it's
> not going to happen now.
>
> Thanks and 72
>
> Garry/Ve7ajj
>

3267. ats3b checkout

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-21 04:32:41 UTC
From: David Matthews
Topic: 3267 Message: 3267

Hey Group,
I have an ats3b and I have assembled it up to installation of inductors,
that is, page 23 in the manual. During checkout everything seems to work OK,
except I get no response when I plug in the paddle and send --no dits no dahs.
Any help would me appreciated.

thanks,
Dave, ki6aco

3268. ats3b checkout problem

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-21 04:42:21 UTC
From: banjodave87
Topic: 3268 Message: 3268

Hi group,
I have an ats3b, and I just finished initial assembl;, up the checkout stage, page 23 of the manual. Everything seems to work OK except when I plug in a paddle and send cw; no dits and only a click when I send a dah. Any help would be appreciated.

Dave, ki6aco

3269. Re: [AT_Sprint] ats3b checkout

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-21 04:59:34 UTC
From: Stephen Wandling
Topic: 3267 Message: 3269

Dave,

Make sure the paddle is plugged in before you power up the rig.

72
Stephen
VE7NSD

David Matthews wrote:
> Hey Group,
> I have an ats3b and I have assembled it up to installation of inductors,
> that is, page 23 in the manual. During checkout everything seems to
> work OK,
> except I get no response when I plug in the paddle and send --no dits
> no dahs.
> Any help would me appreciated.
>
> thanks,
> Dave, ki6aco
>
>

3270. Re: [AT_Sprint] ats3b checkout

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-21 13:31:46 UTC
From: Michael Harnage
Topic: 3267 Message: 3270

First things first,

The paddle plug must be plugged all the way in.

Make sure that the paddle is working. Ports 8 and 9 of
the MPU (U6) should normally be 3.5V. When paddles are
closed they should be 0V (one for dit and one for
dah).

If that's OK we'll try something else...

-mike/w1mt

--- David Matthews <matthewsdavid@...>
wrote:

> Hey Group,
> I have an ats3b and I have assembled it up to
> installation of inductors,
> that is, page 23 in the manual. During checkout
> everything seems to work OK,
> except I get no response when I plug in the paddle
> and send --no dits no dahs.
> Any help would me appreciated.
>
> thanks,
> Dave, ki6aco
>

3271. Re: ats3b checkout

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-21 15:08:51 UTC
From: banjodave87
Topic: 3267 Message: 3271

Groups,
Thanks for suggestions.

Here are more details:
-paddle is plugged all the way in and p8 and p9 go to zero on send
as required;

-all control buttons seem to work;

-the U6 voltages are about 3.27v for pins p5, p7, p8, p9, p10, p21,
p22, and p23;

-the regulated voltage is 3.44v;

thanks,
Dave, ki6aco

--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:
>
> First things first,
>
> The paddle plug must be plugged all the way in.
>
> Make sure that the paddle is working. Ports 8 and 9 of
> the MPU (U6) should normally be 3.5V. When paddles are
> closed they should be 0V (one for dit and one for
> dah).
>
> If that's OK we'll try something else...
>
> -mike/w1mt
>
>
>
> --- David Matthews <matthewsdavid@...>
> wrote:
>
> > Hey Group,
> > I have an ats3b and I have assembled it up to
> > installation of inductors,
> > that is, page 23 in the manual. During checkout
> > everything seems to work OK,
> > except I get no response when I plug in the paddle
> > and send --no dits no dahs.
> > Any help would me appreciated.
> >

> > thanks,
> > Dave, ki6aco
> >
>

3272. Re: [AT_Sprint] Re: ats3b checkout

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-21 23:04:00 UTC
From: Michael Harnage
Topic: 3267 Message: 3272

I'm thinking that your power supply may be weak. 3.27v
seems a little low. What power source are you using?
If it's a used 9v battery please try something else
with a little more capacity. A brand new 9v battery
will work long enough to get through testing.

I assume you heard the band annunciated at power up.
Do you hear the menu when holding down the menu
button?
If so, then the sidetone is working. Also means that
mute is switching U4 properly.

What does the drain of Q4 do when holding the dah
paddle closed? (Voltage?)

Oh yeah, what is the current drain when nothing is
happening? Let's try to rule out a short somewhere.

-mike

--- banjodave87 <matthewsdavid@...> wrote:

> Groups,
> Thanks for suggestions.
>
> Here are more details:
> -paddle is plugged all the way in and p8 and p9 go
> to zero on send
> as required;
>
> -all control buttons seem to work;
>
> -the U6 voltages are about 3.27v for pins p5, p7,
> p8, p9, p10, p21,
> p22, and p23;
>
> -the regulated voltage is 3.44v;
>
> thanks,
> Dave, ki6aco
>
>
> --- In AT_Sprint@yahoogroups.com, Michael Harnage
> <w1mt@...> wrote:
> >
> > First things first,

> >
> > The paddle plug must be plugged all the way in.
> >
> > Make sure that the paddle is working. Ports 8 and
> 9 of
> > the MPU (U6) should normally be 3.5V. When paddles
> are
> > closed they should be 0V (one for dit and one for
> > dah).
> >
> > If that's OK we'll try something else...
> >
> > -mike/w1mt
> >
> >

3273. RE: [AT_Sprint] Yes, I'm back...

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-21 23:47:25 UTC
From: Ken Lotts
Topic: 3230 Message: 3273

Hey Steve.....

Can you upload that new code with the Iambic B mode change yet?

Ken Lotts
aa7jc

3274. FD 2008

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-22 14:10:06 UTC
From: jpkeon@nc.rr.com
Topic: 3274 Message: 3274

I already posted to some of you and I wanted to add these for your viewing.

We will be operating WQ4RP and with our own callsigns on the FD event this coming weekend from Black Balsam Ridge and Sam's Knob.

http://jblevins.org/photos/artloeb/

I will be operating QRP of course and will be using the handkey for part of the time.

I look forward to making contact with those of you on the air. We will be on the HF bands on and off as the bands allow up there.

For those interested we will also be using 2m/70cm/6m with our beams from the top (6,214 feet) and hope to do well this year with the addition of the new bands for us.

JohnPaul/AB4PP
SKCC # 0032, EPA, AT

3275. Re: FD 2008

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-22 18:33:09 UTC
From: radio_kx0r
Topic: 3274 Message: 3275

--- In AT_Sprint@yahoogroups.com, <jpkeon@...> wrote:

All,

KX0R will be operating 1B Battery/QRP in the Medicine Bow Forest of SE Wyoming at 7800 feet elevation for FD next weekend.

I plan to operate 40, 20, and 15 meters, and perhaps 80, 10, and 6M if conditions are favorable. There's a chance I'll be on the air by Friday night.

This morning I charged up a couple of batteries with my solar panel.

Hope to work some of you!

72

Carey
KX0R

> I already posted to some of you and I wanted to add these for your viewing.
>
> We will be operating WQ4RP and with our own callsigns on the FD event this coming weekend from Black Balsam Ridge and Sam's Knob.
>
> http://jblevins.org/photos/artloeb/
>
> I will be operating QRP of course and will be using the handkey for part of the time.
>
> I look forward to making contact with those of you on the air. We will be on the HF bands on and off as the bands allow up there.
>
> For those interested we will also be using 2m/70cm/6m with our beams from the top (6,214 feet) and hope to do well this year with the addition of the new bands for us.
>
> JohnPaul/AB4PP
> SKCC # 0032, EPA, AT
>

3276. Re: Help ---- Ats3b part issue

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-22 20:10:09 UTC
From: Garry
Topic: 3263 Message: 3276

Ah I see. The label at the top of the column was markings or color
so I guess I didn't understand that the SOT-6 meant the package
type. Silly me 8>)

Thanks for the heads up.

73

Garry/Ve7ajj

--- In AT_Sprint@yahoogroups.com, "Jim Fraser" <jimf53@...> wrote:
>
> The parts list is on Page 14 of the 3B manual:
>
> 74LVC1G3157 "CC5R" SOT-6
>
> Looks like it is an SOT-6 package.
>
> Jim K6JF
>
> --- In AT_Sprint@yahoogroups.com, "Garry" <ve7ajj@> wrote:
> >
> > I finally got back to the build of my 3b and started the install
of
> > the semiconductor devices. Murphey nailed me in short order.
> OOps,
> > 1 part short! I cannot locate the 74LVC1G3157 (U4). I don't
know
> > if I lost it or it was missed while packaging but that's not my
> > concern here I will try to pick one up locally but I am almost
> dead
> > certain it will have to be ordered and I am not sure what package
I
> > need. Can anyone help me here and tell me what package is needed
> to
> > fit the board? I'm pretty certain that anything larger won't
work
> > and I don't even know if it's possible to get one that is smaller.
> >
> > I searched through the manual but if its there, I missed the
parts
> > list and the package type. I got the component off the schematic
> >
> > Bummer, I was hoping to have it ready for field day but I guess
> it's
> > not going to happen now.

> >
> > Thanks and 72
> >
> > Garry/Ve7ajj
> >
>

3277. ATS 3B For Sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-22 22:03:05 UTC
From: g6ybc
Topic: 3277 Message: 3277

Hi All

My unbuilt 3B kit is up for sale. Still un-packed, as I received it from Steve.

With all the things going on, I just don't have the time to build.

Original price $190 (£98.00 GBP) shipped UK mainland UK. Postage at cost else where.

Contact me off list for further details.

Best regards

Dennis G6YBC

3278. Re: [AT_Sprint] Re: ats3b checkout

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-23 00:56:25 UTC
From: David Matthews
Topic: 3267 Message: 3278

More detail.
The 3.27v appears only at pins 5, 7, 8, 9, 10, 21, 22, and 23 of U6.
The regulator supplies 3.44v. So I have a voltage drop across the 47K pulldown resistors, R35, R36, R37, R38, R39,
and R40 of 3.44-3.27v or 0.17v. This corresponds to a current into each of these pins of about 3.6uA in the "off" state.
Is 3.6uA a reasonable value at the pins 5, 7, 8, 9, 10, 21, 22, and 23 of the MPU, U6??

And yes, the band indicator works, and does everything else I can test with the push buttons.

Q4 drain drops a fraction of a volt for second or two holding the dah paddle closed; there is
no drop at all with the dit paddle closed.

Dave

----- Original Message ----
From: Michael Harnage <w1mt@...>
To: AT_Sprint@yahoogroups.com
Sent: Saturday, June 21, 2008 4:04:00 PM
Subject: Re: [AT_Sprint] Re: ats3b checkout

I'm thinking that your power supply may be weak. 3.27v
seems a little low. What power source are you using?
If it's a used 9v battery please try something else
with a little more capacity. A brand new 9v battery
will work long enough to get through testing.

I assume you heard the band annunciated at power up.
Do you hear the menu when holding down the menu
button?
If so, then the sidetone is working. Also means that
mute is switching U4 properly.

What does the drain of Q4 do when holding the dah
paddle closed? (Voltage?)

Oh yeah, what is the current drain when nothing is
happening? Let's try to rule out a short somewhere.

-mike

--- banjodave87 <matthewsdavid@ rocketmail. com> wrote:

> Groups,
> Thanks for suggestions.
>

> Here are more details:
> -paddle is plugged all the way in and p8 and p9 go
> to zero on send
> as required;
>
> -all control buttons seem to work;
>
> -the U6 voltages are about 3.27v for pins p5, p7,
> p8, p9, p10, p21,
> p22, and p23;
>
> -the regulated voltage is 3.44v;
>
> thanks,
> Dave, ki6aco
>
>
> --- In AT_Sprint@yahoogrou ps.com, Michael Harnage
> <w1mt@...> wrote:
> >
> > First things first,
> >
> > The paddle plug must be plugged all the way in.
> >
> > Make sure that the paddle is working. Ports 8 and
> 9 of
> > the MPU (U6) should normally be 3.5V. When paddles
> are
> > closed they should be 0V (one for dit and one for
> > dah).
> >
> > If that's OK we'll try something else...
> >
> > -mike/w1mt
> >
> >

3279. Re: [AT_Sprint] Re: ats3b checkout

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-23 02:09:00 UTC
From: Stephen Wandling
Topic: 3267 Message: 3279

Dave,

Did you ever confirm that you have the paddle plugged in when you power up the rig?

72
Stephen
VE7NSD

David Matthews wrote:
> More detail.
> The 3.27v appears only at pins 5, 7, 8, 9, 10, 21, 22, and 23 of U6.
> The regulator supplies 3.44v. So I have a voltage drop across the 47K
> pulldown resistors, R35, R36, R37, R38, R39,
> and R40 of 3.44-3.27v or 0.17v. This corresponds to a current into
> each of these pins of about 3.6uA in the "off" state.
> Is 3.6uA a reasonable value at the pins 5, 7, 8, 9, 10, 21, 22, and 23
> of the MPU, U6??
>
> And yes, the band indicator works, and does everything else I can test
> with the push buttons.
>
> Q4 drain drops a fraction of a volt for second or two holding the dah
> paddle closed; there is
> no drop at all with the dit paddle closed.
>
> Dave
>
> ----- Original Message ----
> From: Michael Harnage <w1mt@...>
> To: AT_Sprint@yahoogroups.com
> Sent: Saturday, June 21, 2008 4:04:00 PM
> Subject: Re: [AT_Sprint] Re: ats3b checkout
>
> I'm thinking that your power supply may be weak. 3.27v
> seems a little low. What power source are you using?
> If it's a used 9v battery please try something else
> with a little more capacity. A brand new 9v battery
> will work long enough to get through testing.
>
> I assume you heard the band annunciated at power up.
> Do you hear the menu when holding down the menu
> button?
> If so, then the sidetone is working. Also means that
> mute is switching U4 properly.
>

> What does the drain of Q4 do when holding the dah
> paddle closed? (Voltage?)
>
> Oh yeah, what is the current drain when nothing is
> happening? Let's try to rule out a short somewhere.
>
> -mike
>
> --- banjodave87 <matthewsdavid@ rocketmail. com
> <mailto:matthewsdavid%40rocketmail.com>> wrote:
>
> > Groups,
> > Thanks for suggestions.
> >
> > Here are more details:
> > -paddle is plugged all the way in and p8 and p9 go
> > to zero on send
> > as required;
> >
> > -all control buttons seem to work;
> >
> > -the U6 voltages are about 3.27v for pins p5, p7,
> > p8, p9, p10, p21,
> > p22, and p23;
> >
> > -the regulated voltage is 3.44v;
> >
> > thanks,
> > Dave, ki6aco
> >
> >
> > --- In AT_Sprint@yahoogrou ps.com
> <mailto:AT_Sprint%40yahoogroups.com>, Michael Harnage
> > <w1mt@...> wrote:
> > >
> > > First things first,
> > >
> > > The paddle plug must be plugged all the way in.
> > >
> > > Make sure that the paddle is working. Ports 8 and
> > 9 of
> > > the MPU (U6) should normally be 3.5V. When paddles
> > are
> > > closed they should be 0V (one for dit and one for
> > > dah).
> > >
> > > If that's OK we'll try something else...
> > >
> > > -mike/w1mt
> > >

> > >
>
>
>

3280. Re: [AT_Sprint] Re: ats3b checkout

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-23 02:23:10 UTC
From: Michael Harnage
Topic: 3267 Message: 3280

That only makes a difference when you want to use a
straight key. You can plug a paddle in at any time.
Course you're likely to get an inadvertent dit or dah
as the contacts short as you plug it in, but it should
be fine. :)

-mike

--- Stephen Wandling <swandling@...> wrote:

> Dave,
>
> Did you ever confirm that you have the paddle
> plugged in when you power
> up the rig?
>

3281. Re: [AT_Sprint] Re: ats3b checkout

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-23 02:28:39 UTC
From: Michael Harnage
Topic: 3267 Message: 3281

Still bugs me that you don't have 3.5v at the ports.
What is you power source? What is the current draw
with power on but nothing else occurring?

-mike

--- David Matthews <matthewsdavid@...>
wrote:

> More detail.
> The 3.27v appears only at pins 5, 7, 8, 9, 10, 21,
> 22, and 23 of U6.
> The regulator supplies 3.44v. So I have a voltage
> drop across the 47K pulldown resistors, R35, R36,
> R37, R38, R39,
> and R40 of 3.44-3.27v or 0.17v. This corresponds to
> a current into each of these pins of about 3.6uA in
> the "off" state.
> Is 3.6uA a reasonable value at the pins 5, 7, 8, 9,
> 10, 21, 22, and 23 of the MPU, U6??
>
> And yes, the band indicator works, and does
> everything else I can test with the push buttons.
>
> Q4 drain drops a fraction of a volt for second or
> two holding the dah paddle closed; there is
> no drop at all with the dit paddle closed.
>
> Dave
>

3282. Re: Help ---- Ats3b part issue

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-23 03:30:52 UTC
From: k6jf_radio
Topic: 3263 Message: 3282

Garry:

Hope you find a replacement and get on the air for Field Day. I am also hopeful to work my 3B on Field Day, but I am waiting for a replacement Audio AGC chip from Steve. I could work it as is but the audio is very low.

Jim K6JF

--- In AT_Sprint@yahoogroups.com, "Garry" <ve7ajj@...> wrote:
>
> Ah I see. The label at the top of the column was markings or color
> so I guess I didn't understand that the SOT-6 meant the package
> type. Silly me 8>)
>
> Thanks for the heads up.
>
> 73
>
> Garry/Ve7ajj
>
> --- In AT_Sprint@yahoogroups.com, "Jim Fraser" <jimf53@> wrote:
> >
> > The parts list is on Page 14 of the 3B manual:
> >
> > 74LVC1G3157 "CC5R" SOT-6
> >
> > Looks like it is an SOT-6 package.
> >
> > Jim K6JF
> >
> > --- In AT_Sprint@yahoogroups.com, "Garry" <ve7ajj@> wrote:
> > >
> > > I finally got back to the build of my 3b and started the install
> of
> > > the semiconductor devices. Murphey nailed me in short order.
> > OOps,
> > > 1 part short! I cannot locate the 74LVC1G3157 (U4). I don't
> know
> > > if I lost it or it was missed while packaging but that's not my
> > > concern here I will try to pick one up locally but I am almost
> > dead

> > > certain it will have to be ordered and I am not sure what
package
> I
> > > need. Can anyone help me here and tell me what package is
needed
> > to
> > > fit the board? I'm pretty certain that anything larger won't
> work
> > > and I don't even know if it's possible to get one that is
smaller.
> > >
> > > I searched through the manual but if its there, I missed the
> parts
> > > list and the package type. I got the component off the
schematic
> > >
> > > Bummer, I was hoping to have it ready for field day but I
guess
> > it's
> > > not going to happen now.
> > >
> > > Thanks and 72
> > >
> > > Garry/Ve7ajj
> > >
> >
>

3283. Re: ats3b checkout

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-23 03:37:20 UTC
From: radio_kx0r
Topic: 3267 Message: 3283

--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:

Dave,

1) Do you hear the sidetone with dits and dahs?
2) If you have some response at Q4, but not corresponding to all the dits and dahs, your problem is upstream.
3) Please answer ALL of Mike's questions about the power supply, the current draw, etc. Your answers will help steer the analysis. He needs to narrow down the problem.
4) Based on the limited info we have, it sounds like a power regulation issue, or a failure because some connection(s) are open or shorted.
5) Please get a really bright light, and some kind of strong optical magnification, and inspect your board, particularly the circuits near and around the processor. Look for a leg not soldered, a difference in appearance, a part not soldered at one end, a solder bridge, etc.
6) If you can do it, probe the circuit while you do your inspection. See if the voltages correspond to what you would expect based on the schematic. Be careful not to slip or short between any pins.
7) Measure the current in the supply line to the board, both on receive and when trying to send, and see if it's pulsing, how much, etc. Please use a stiff power supply for these measurements. A regulated, current-limitied supply is best.

If your visual inspection doesn't hint at the problem, your measurements will lead to a line of inquiry that will solve your mystery. This rig isn't as complex as many, even though it's clever and sophisticiated in what it does. You'll get this figured out.

72/73

Carey
KX0R

> Still bugs me that you don't have 3.5v at the ports.
> What is you power source? What is the current draw
> with power on but nothing else occurring?
>
> -mike
>
> --- David Matthews <matthewsdavid@...>
> wrote:
>
> > More detail.
> > The 3.27v appears only at pins 5, 7, 8, 9, 10, 21,

> > 22, and 23 of U6.
> > The regulator supplies 3.44v. So I have a voltage
> > drop across the 47K pulldown resistors, R35, R36,
> > R37, R38, R39,
> > and R40 of 3.44-3.27v or 0.17v. This corresponds to
> > a current into each of these pins of about 3.6uA in
> > the "off" state.
> > Is 3.6uA a reasonable value at the pins 5, 7, 8, 9,
> > 10, 21, 22, and 23 of the MPU, U6??
> >
> > And yes, the band indicator works, and does
> > everything else I can test with the push buttons.
> >
> > Q4 drain drops a fraction of a volt for second or
> > two holding the dah paddle closed; there is
> > no drop at all with the dit paddle closed.
> >
> > Dave
> >
>

3284. Re: [AT_Sprint] Re: ats3b checkout

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-23 04:39:45 UTC
From: Stephen Wandling
Topic: 3267 Message: 3284

While I don't have the technical background of Mike or Carey, I want to question why you have 3.27V on pin 5. The watch crystal is tied across 5 & 6 and their voltages should be 2.7 & 1.7 respectively. What is the voltage on 6? I believe that the watch crystal is used in the keyer circuit? If that is correct then a high voltage on one side of the crystal would seem to be linked to no keying?

Mike has cleared up my misconception that the paddle had to be plugged on power up, and thank you for that. I throw out the above in the spirit of learning. Who know what I will learn. :-) If I was a guessing man I would be looking for a short between 6 & 7, but that's probably because I don't know the interior architecture of the chip, so it would be a way to get high voltage on the crystal.

72
Stephen
VE7NSD

David Matthews wrote:
> More detail.
> The 3.27v appears only at pins 5, 7, 8, 9, 10, 21, 22, and 23 of U6.
> The regulator supplies 3.44v. So I have a voltage drop across the 47K
> pulldown resistors, R35, R36, R37, R38, R39,
> and R40 of 3.44-3.27v or 0.17v. This corresponds to a current into
> each of these pins of about 3.6uA in the "off" state.
> Is 3.6uA a reasonable value at the pins 5, 7, 8, 9, 10, 21, 22, and 23
> of the MPU, U6??
>
> And yes, the band indicator works, and does everything else I can test
> with the push buttons.
>
> Q4 drain drops a fraction of a volt for second or two holding the dah
> paddle closed; there is
> no drop at all with the dit paddle closed.
>
> Dave
>
> ----- Original Message ----
> From: Michael Harnage <w1mt@...>
> To: AT_Sprint@yahoogroups.com
> Sent: Saturday, June 21, 2008 4:04:00 PM
> Subject: Re: [AT_Sprint] Re: ats3b checkout
>
> I'm thinking that your power supply may be weak. 3.27v
> seems a little low. What power source are you using?
> If it's a used 9v battery please try something else

> with a little more capacity. A brand new 9v battery
> will work long enough to get through testing.
>
> I assume you heard the band annunciated at power up.
> Do you hear the menu when holding down the menu
> button?
> If so, then the sidetone is working. Also means that
> mute is switching U4 properly.
>
> What does the drain of Q4 do when holding the dah
> paddle closed? (Voltage?)
>
> Oh yeah, what is the current drain when nothing is
> happening? Let's try to rule out a short somewhere.
>
> -mike
>
> --- banjodave87 <matthewsdavid@ rocketmail. com
> <mailto:matthewsdavid%40rocketmail.com>> wrote:
>
> > Groups,
> > Thanks for suggestions.
> >
> > Here are more details:
> > -paddle is plugged all the way in and p8 and p9 go
> > to zero on send
> > as required;
> >
> > -all control buttons seem to work;
> >
> > -the U6 voltages are about 3.27v for pins p5, p7,
> > p8, p9, p10, p21,
> > p22, and p23;
> >
> > -the regulated voltage is 3.44v;
> >
> > thanks,
> > Dave, ki6aco
> >
> >
> > --- In AT_Sprint@yahoogrou ps.com
> <mailto:AT_Sprint%40yahoogroups.com>, Michael Harnage
> > <w1mt@...> wrote:
> > >
> > > First things first,
> > >
> > > The paddle plug must be plugged all the way in.
> > >
> > > Make sure that the paddle is working. Ports 8 and
> > 9 of

> > > the MPU (U6) should normally be 3.5V. When paddles
> > are
> > > closed they should be 0V (one for dit and one for
> > > dah).
> > >
> > > If that's OK we'll try something else...
> > >
> > > -mike/w1mt
> > >
> > >
>
>
>

3285. AT audio amp and batteries

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-23 11:55:22 UTC
From: Dale Putnam
Topic: 3285 Message: 3285

I've a "too large" stock of recharageable 9v and AA batteries, I use them for the AT rigs. Email me off list for prices, or make an offer. I also have some very nice alkaline AA batteries, that are much better than the ones bought at the stores, in that they last longer, the AT rigs produce rated power with them a number of hours/days longer, of course your results may vary, depending on current demand.

I also have been working on an audio amp drop in for the AT rigs. I've tried a PC board, and a simple "dead bug" arrangement, for space and weight, the dead bug wins.

I have enough parts to either kit up 3 of these, or build them and send them out. They have a volume control add, that doesn't have to include an extra mounting hole, however, that has advantages too. Please state which you want. If there is enough interest, I would order more parts and do it again. More details? Just ask, I'll post more details. No problem. Simply no time now,
Thanks,
--... ...--Dale - WC7S in Wy

_____
Earn cashback on your purchases with Live Search - the search that pays you back!
http://search.live.com/cashback/?&pkw=form=MIJAAF/publ=HMTGL/crea=earncashback

3286. Re: FD 2008

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-23 15:17:36 UTC
From: c6alk
Topic: 3274 Message: 3286

I will be doing a very laid back FD with W0WN. We plan to be QRP 1 or 2B. I have 3 riding mower batteries charged up with solar power. The rigs will be a K2 and a K-1. I will arrive Thursday night, so will be playing with the ATS3 prior to the FD event on Friday. We will be in WY, at the Bear Lodge campground. This is located on a hill in NE WY. With at least 2 QRP CW stations on, maybe folks will not be dissapointed by not hearing WY in the event. Although SPC multipliers don't count in FD as we know, lot's of groups enjoy trying to WAS.

Brian K7RE

--- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@...> wrote:
>
> --- In AT_Sprint@yahoogroups.com, <jpkeon@> wrote:
>
> All,
>
> KX0R will be operating 1B Battery/QRP in the Medicine Bow Forest of
> SE Wyoming at 7800 feet elevation for FD next weekend.
>
> I plan to operate 40, 20, and 15 meters, and perhaps 80, 10, and 6M
> if conditions are favorable. There's a chance I'll be on the air by
> Friday night.
>
> This morning I charged up a couple of batteries with my solar panel.
>
> Hope to work some of you!
>
> 72
>
> Carey
> KX0R
>
> > I already posted to some of you and I wanted to add these for your
> viewing.
> >
> > We will be operating WQ4RP and with our own callsigns on the FD
> event this coming weekend from Black Balsam Ridge and Sam's Knob.
> >
> > http://jblevins.org/photos/artloeb/
> >
> > I will be operating QRP of course and will be using the handkey for
> part of the time.
> >
> > I look forward to making contact with those of you on the air. We

> will be on the HF bands on and off as the bands allow up there.
> >
> > For those interested we will also be using 2m/70cm/6m with our
> beams from the top (6,214 feet) and hope to do well this year with
> the addition of the new bands for us.
> >
> > JohnPaul/AB4PP
> > SKCC # 0032, EPA, AT
> >
>

3287. RE: [AT_Sprint] Re: FD 2008

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-23 18:04:35 UTC
From: Dale Putnam
Topic: 3274 Message: 3287

Good Luck, Brian, and stay safe, have a blast.
I am not sure if I will be on much at all, antenna work and stuff to do, however,
If I get on, it will be qrp, with the home antennas. Unless, I take my 2nd harmonic fishing,
then I'll be with a mobile screwdriver, qrp.
We should swap lies after. or at least exchange reports. --... ...--Dale - WC7S in Wy

To: AT_Sprint@yahoogroups.comFrom: K7RE@...: Mon, 23 Jun 2008 15:17:36 +0000Subject: [AT_Sprint] Re: FD 2008

I will be doing a very laid back FD with W0WN. We plan to be QRP 1 or2B. I have 3 riding mower batteries charged up with solar power. Therigs will be a K2 and a K-1. I will arrive Thursday night, so will beplaying with the ATS3 prior to the FD event on Friday. We will be inWY, at the Bear Lodge campground. This is located on a hill in NEWY. With at least 2 QRP CW stations on, maybe folks will not bedissapointed by not hearing WY in the event. Although SPC multipliersdon't count in FD as we know, lot's of groups enjoy trying to WAS. Brian K7RE--- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@...> wrote:>> --- In AT_Sprint@yahoogroups.com, <jpkeon@> wrote:> > All,> > KX0R will be operating 1B Battery/QRP in the Medicine Bow Forest of > SE Wyoming at 7800 feet elevation for FD next weekend.> > I plan to operate 40, 20, and 15 meters, and perhaps 80, 10, and 6M > if conditions are favorable. There's a chance I'll be on the air by > Friday night.> > This morning I charged up a couple of batteries with my solar panel.> > Hope to work some of you!> > 72> > Carey> KX0R> > > I already posted to some of you and I wanted to add these for your > viewing.> > > > We will be operating WQ4RP and with our own callsigns on the FD > event this coming weekend from Black Balsam Ridge and Sam's Knob. > > > > http://jblevins.org/photos/artloeb/> > > > I will be operating QRP of course and will be using the handkey for > part of the time. > > > > I look forward to making contact with those of you on the air. We > will be on the HF bands on and off as the bands allow up there.> > > > For those interested we will also be using 2m/70cm/6m with our > beams from the top (6,214 feet) and hope to do well this year with > the addition of the new bands for us.> > > > JohnPaul/AB4PP> > SKCC # 0032, EPA, AT> >>

_____
Introducing Live Search cashback . It's search that pays you back!
http://search.live.com/cashback/?&pkw=form=MIJAAF/publ=HMTGL/crea=introsrchcashback

3288. Re: [AT_Sprint] Re: FD 2008

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-23 18:10:28 UTC
From: n0tu/Steve
Topic: 3274 Message: 3288

I'm planning some 6m FD QSOs via my field friendly hexbeam:
http://picasaweb.google.com/n0tu.qrp/6mHexBEAM/photo#s5214484113972030210

Also be on HF bands as usual via goat power. Steve/n0tu
http://n0tu.blogspot.com/

On Mon, Jun 23, 2008 at 7:04 PM, Dale Putnam <daleputnam@...> wrote:
>
> Good Luck, Brian, and stay safe, have a blast.
> I am not sure if I will be on much at all, antenna work and stuff to do,
> however,
> If I get on, it will be qrp, with the home antennas. Unless, I take my 2nd
> harmonic fishing,
> then I'll be with a mobile screwdriver, qrp.
> We should swap lies after. or at least exchange reports.
> --... ...--
> Dale - WC7S in Wy
>
>
> _____
> To: AT_Sprint@yahoogroups.com
> From: K7RE@...
> Date: Mon, 23 Jun 2008 15:17:36 +0000
> Subject: [AT_Sprint] Re: FD 2008
>
> I will be doing a very laid back FD with W0WN. We plan to be QRP 1 or
> 2B. I have 3 riding mower batteries charged up with solar power. The
> rigs will be a K2 and a K-1. I will arrive Thursday night, so will be
> playing with the ATS3 prior to the FD event on Friday. We will be in
> WY, at the Bear Lodge campground. This is located on a hill in NE
> WY. With at least 2 QRP CW stations on, maybe folks will not be
> dissapointed by not hearing WY in the event. Although SPC multipliers
> don't count in FD as we know, lot's of groups enjoy trying to WAS.
>
> Brian K7RE
>
> --- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@...> wrote:
>>
>> --- In AT_Sprint@yahoogroups.com, <jpkeon@> wrote:
>>
>> All,
>>
>> KX0R will be operating 1B Battery/QRP in the Medicine Bow Forest of
>> SE Wyoming at 7800 feet elevation for FD next weekend.
>>

>> I plan to operate 40, 20, and 15 meters, and perhaps 80, 10, and 6M
>> if conditions are favorable. There's a chance I'll be on the air by
>> Friday night.
>>
>> This morning I charged up a couple of batteries with my solar panel.
>>
>> Hope to work some of you!
>>
>> 72
>>
>> Carey
>> KX0R
>>
>> > I already posted to some of you and I wanted to add these for your
>> viewing.
>> >
>> > We will be operating WQ4RP and with our own callsigns on the FD
>> event this coming weekend from Black Balsam Ridge and Sam's Knob.
>> >
>> > http://jblevins.org/photos/artloeb/
>> >
>> > I will be operating QRP of course and will be using the handkey for
>> part of the time.
>> >
>> > I look forward to making contact with those of you on the air. We
>> will be on the HF bands on and off as the bands allow up there.
>> >
>> > For those interested we will also be using 2m/70cm/6m with our
>> beams from the top (6,214 feet) and hope to do well this year with
>> the addition of the new bands for us.
>> >
>> > JohnPaul/AB4PP
>> > SKCC # 0032, EPA, AT
>> >
>>
>
>
>
> _____
> Introducing Live Search cashback . It's search that pays you back! Try it
> Now

3289. Re: ats3b checkout

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-23 18:11:05 UTC
From: w1mt
Topic: 3267 Message: 3289

One more thing to test.

Enter alternative paddle mode and see if the tune up /tune down buttons
send dits and dahs. Let us know.

-mike

3290. Re: FD 2008

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-24 14:03:38 UTC
From: c6alk
Topic: 3274 Message: 3290

Dale:
Sure, would love to share results with you and all who might be interested. I'll try and make a few HFPack type roving QSO's with thw ATS3 on Friday before the contest begins on Saturday. I will also be on 6M SSB with my ancient IC-502 QRP SSB rig. It will do CW, but I am somewhat embarassed by the huge chirp!

Brian K7RE

--- In AT_Sprint@yahoogroups.com, Dale Putnam <daleputnam@...> wrote:
>
>
> Good Luck, Brian, and stay safe, have a blast.
> I am not sure if I will be on much at all, antenna work and stuff to do, however,
> If I get on, it will be qrp, with the home antennas. Unless, I take my 2nd harmonic fishing,
> then I'll be with a mobile screwdriver, qrp.
> We should swap lies after. or at least exchange reports. --...
...--Dale - WC7S in Wy
>
>
> To: AT_Sprint@...: K7RE@...: Mon, 23 Jun 2008 15:17:36 +0000Subject: [AT_Sprint] Re: FD 2008
>
>
>
>
> I will be doing a very laid back FD with W0WN. We plan to be QRP 1 or2B. I have 3 riding mower batteries charged up with solar power. Therigs will be a K2 and a K-1. I will arrive Thursday night, so will beplaying with the ATS3 prior to the FD event on Friday. We will be inWY, at the Bear Lodge campground. This is located on a hill in NEWY. With at least 2 QRP CW stations on, maybe folks will not bedissapointed by not hearing WY in the event. Although SPC multipliersdon't count in FD as we know, lot's of groups enjoy trying to WAS. Brian K7RE--- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@> wrote:>> --- In AT_Sprint@yahoogroups.com, <jpkeon@> wrote:> > All,> > KX0R will be operating 1B Battery/QRP in the Medicine Bow Forest of > SE Wyoming at 7800 feet elevation for FD next weekend.> > I plan to operate 40, 20, and 15 meters, and perhaps 80, 10, and 6M > if conditions are favorable. There's a chance I'll be on the air by > Friday night.> > This morning I charged up a couple of batteries with my solar panel.> > Hope to work some of you!> > 72> > Carey> KX0R> > > I already posted to some of you and I wanted to add

these for your > viewing.> > > > We will be operating WQ4RP and with
our own callsigns on the FD > event this coming weekend from Black
Balsam Ridge and Sam's Knob. > > > >
http://jblevins.org/photos/artloeb/> > > > I will be operating QRP of
course and will be using the handkey for > part of the time. > > > > I
look forward to making contact with those of you on the air. We > will
be on the HF bands on and off as the bands allow up there.> > > > For
those interested we will also be using 2m/70cm/6m with our > beams
from the top (6,214 feet) and hope to do well this year with > the
addition of the new bands for us.> > > > JohnPaul/AB4PP> > SKCC #
0032, EPA, AT> >>
>
>
>
>
>
>
> _____
> Introducing Live Search cashback . It's search that pays you back!
>
http://search.live.com/cashback/?&pkw=form=MIJAAF/publ=HMTGL/crea=introsrchcashback
>

3291. Re: [AT_Sprint] Re: FD 2008

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-24 14:27:54 UTC
From: n0tu/Steve
Topic: 3274 Message: 3291

> am somewhat embarassed by the huge chirp!
> Brian K7RE

I'll make it all the easier to find you!
I'll look for you Friday PM on 6m SSB/CW ...once I'm setup!

=D Steve/n0tu

On Tue, Jun 24, 2008 at 3:03 PM, c6alk <K7RE@...> wrote:
>
> Dale:
> Sure, would love to share results with you and all who might be
> interested. I'll try and make a few HFPack type roving QSO's with
> thw ATS3 on Friday before the contest begins on Saturday. I will also
> be on 6M SSB with my ancient IC-502 QRP SSB rig. It will do CW, but I
> am somewhat embarassed by the huge chirp!
>
> Brian K7RE
>
> --- In AT_Sprint@yahoogroups.com, Dale Putnam <daleputnam@...> wrote:
>>
>>
>> Good Luck, Brian, and stay safe, have a blast.
>> I am not sure if I will be on much at all, antenna work and stuff to
> do, however,
>> If I get on, it will be qrp, with the home antennas. Unless, I take
> my 2nd harmonic fishing,
>> then I'll be with a mobile screwdriver, qrp.
>> We should swap lies after. or at least exchange reports. --...
> ...--Dale - WC7S in Wy
>>
>>
>> To: AT_Sprint@...: K7RE@...: Mon, 23 Jun 2008 15:17:36 +0000Subject:
> [AT_Sprint] Re: FD 2008
>>
>>
>>
>>
>> I will be doing a very laid back FD with W0WN. We plan to be QRP 1
> or2B. I have 3 riding mower batteries charged up with solar power.
> Therigs will be a K2 and a K-1. I will arrive Thursday night, so will
> beplaying with the ATS3 prior to the FD event on Friday. We will be
> inWY, at the Bear Lodge campground. This is located on a hill in NEWY.
> With at least 2 QRP CW stations on, maybe folks will not
> bedissapointed by not hearing WY in the event. Although SPC
> multipliersdon't count in FD as we know, lot's of groups enjoy trying

> to WAS. Brian K7RE--- In AT_Sprint@yahoogroups.com, "radio_kx0r"
> <careyfuller@> wrote:>> --- In AT_Sprint@yahoogroups.com, <jpkeon@>
> wrote:> > All,> > KX0R will be operating 1B Battery/QRP in the
> Medicine Bow Forest of > SE Wyoming at 7800 feet elevation for FD next
> weekend.> > I plan to operate 40, 20, and 15 meters, and perhaps 80,
> 10, and 6M > if conditions are favorable. There's a chance I'll be on
> the air by > Friday night.> > This morning I charged up a couple of
> batteries with my solar panel.> > Hope to work some of you!> > 72> >
> Carey> KX0R> > > I already posted to some of you and I wanted to add
> these for your > viewing.> > > > We will be operating WQ4RP and with
> our own callsigns on the FD > event this coming weekend from Black
> Balsam Ridge and Sam's Knob. > > > >
> http://jblevins.org/photos/artloeb/> > > > I will be operating QRP of
> course and will be using the handkey for > part of the time. > > > > I
> look forward to making contact with those of you on the air. We > will
> be on the HF bands on and off as the bands allow up there.> > > > For
> those interested we will also be using 2m/70cm/6m with our > beams
> from the top (6,214 feet) and hope to do well this year with > the
> addition of the new bands for us.> > > > JohnPaul/AB4PP> > SKCC #
> 0032, EPA, AT> >>
>>
>>
>>
>>
>>
>>
>> _____
>> Introducing Live Search cashback . It's search that pays you back!
>>
> http://search.live.com/cashback/?&pkw=form=MIJAAF/publ=HMTGL/crea=introsrchcashback
>>
>
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>
>

3292. Re: [AT_Sprint] ATS 3B For Sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-24 16:52:46 UTC
From: Klaus.Moehr@t-online.de
Topic: 3277 Message: 3292

Hi Dennis,

I am vy interested - let me know if until now available

Tnx + 73 de Klaus DM4TJ

-----Original Message-----
Date: Mon, 23 Jun 2008 00:03:05 +0200
Subject: [AT_Sprint] ATS 3B For Sale
From: "g6ybc" <g6ybc@...>
To: AT_Sprint@yahoogroups.com

? ? ? ? ? ? ? ? ? ? ? ? ?

Hi All

My unbuilt 3B kit is up for sale. Still un-packed, as I received it
from Steve.

With all the things going on, I just don't have the time to build.

Original price $190 (?98.00 GBP) shipped UK mainland UK. Postage
at cost else where.

Contact me off list for further details.

Best regards

Dennis G6YBC

? ? ? ? ? ? ? ? ? ? ? ? ? ? ?

Links:
------
[1]
http://groups.yahoo.com/group/AT_Sprint/message/3277;_ylc=X3oDMTM1Mm80cGlhBF9TAzk3MzU5NzE0BGdycElkAzE4MDM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARtc2dJZAMzMjc3BHNlYwNmdHIEc2xrA3Z0cGMEc3RpbWUDMTIxNDE3MjE4NwR0cGNJZAMzMjc3
[2]
http://groups.yahoo.com/group/AT_Sprint/post;_ylc=X3oDMTJxbGFmNWk2BF9TAzk3MzU5NzE0BGdycElkAzE4MDM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARtc2dJZAMzMjc3BHNlYwNmdHIEc2xrA3JwbHkEc3RpbWUDMTIxNDE3MjE4Nw--?act=reply&messageNum=3277
[3]
http://groups.yahoo.com/group/AT_Sprint/post;_ylc=X3oDMTJmY2YwZmw0BF9TAzk3MzU5NzE0BGdycElkAzE4MDM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARzZWMDZnRyBHNsawNudHBjBHN0aW1lAzEyMTQxNzIxODc-
[4]
http://groups.yahoo.com/group/AT_Sprint/messages;_ylc=X3oDMTJmdWtmZW9qBF9TAzk3MzU5NzE0BGdycElkAzE4MDM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARzZWMDZnRyBHNsawNtc2dzBHN0aW1lAzEyMTQxNzIxODc-

[5]
http://groups.yahoo.com/group/AT_Sprint/files;_ylc=X3oDMTJnZDQ5NzJqBF9TAzk3MzU5NzE0BGdycEl
kAzE4MDM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARzZWMDZnRyBHNsawNmaWxlcwRzdGltZQMxMjE0MTcyMTg3
[6]
http://groups.yahoo.com/group/AT_Sprint/photos;_ylc=X3oDMTJmOW1lYzlqBF9TAzk3MzU5NzE0BGdycE
lkAzE4MDM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARzZWMDZnRyBHNsawNwaG90BHN0aW1lAzEyMTQxNzIxODc-
[7]
http://groups.yahoo.com/group/AT_Sprint/links;_ylc=X3oDMTJncHM1MXY1BF9TAzk3MzU5NzE0BGdycEl
kAzE4MDM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARzZWMDZnRyBHNsawNsaW5rcwRzdGltZQMxMjE0MTcyMTg3
[8]
http://groups.yahoo.com/group/AT_Sprint/database;_ylc=X3oDMTJkaTBhNTk3BF9TAzk3MzU5NzE0BGdy
cElkAzE4MDM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARzZWMDZnRyBHNsawNkYgRzdGltZQMxMjE0MTcyMTg3
[9]
http://groups.yahoo.com/group/AT_Sprint/polls;_ylc=X3oDMTJncWhwNWJoBF9TAzk3MzU5NzE0BGdycEl
kAzE4MDM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARzZWMDZnRyBHNsawNwb2xscwRzdGltZQMxMjE0MTcyMTg3
[10]
http://groups.yahoo.com/group/AT_Sprint/members;_ylc=X3oDMTJmZDBocDBhBF9TAzk3MzU5NzE0BGdyc
ElkAzE4MDM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARzZWMDZnRyBHNsawNtYnJzBHN0aW1lAzEyMTQxNzIxODc-
[11]
http://groups.yahoo.com/group/AT_Sprint/calendar;_ylc=X3oDMTJlNzdoMTgwBF9TAzk3MzU5NzE0BGdy
cElkAzE4MDM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARzZWMDZnRyBHNsawNjYWwEc3RpbWUDMTIxNDE3MjE4Nw--
[12]
http://us.ard.yahoo.com/SIG=13r98h2ge/M=624381.12730922.13032918.10835568/D=groups/S=17050
63108:MKP1/Y=YAHOO/EXP=1214179387/L=/B=mcgiEELaX9E-/J=1214172187921845/A=5396680/R=0/SIG=1
4e7adlkt/*http://media.adrevolver.com/adrevolver/href?banner=197791&place=26143&url_=http:
//tc.deals.yahoo.com/tc/blockbuster/display.com?cid=bbi00027

[13]
http://us.ard.yahoo.com/SIG=13r98h2ge/M=624381.12730922.13032918.10835568/D=groups/S=17050
63108:MKP1/Y=YAHOO/EXP=1214179387/L=/B=mcgiEELaX9E-/J=1214172187921845/A=5396680/R=1/SIG=1
4e7adlkt/*http://media.adrevolver.com/adrevolver/href?banner=197791&place=26143&url_=http:
//tc.deals.yahoo.com/tc/blockbuster/display.com?cid=bbi00027

[14]
http://groups.yahoo.com/;_ylc=X3oDMTJlcmI5aWpzBF9TAzk3MzU5NzE0BGdycElkAzE4MDM1NzIzBGdycHNw
SWQDMTcwNTA2MzEwOARzZWMDZnRyBHNsawNnZnAEc3RpbWUDMTIxNDE3MjE4Nw--
[15]
http://groups.yahoo.com/group/AT_Sprint/join;_ylc=X3oDMTJncjhxZzVwBF9TAzk3MzU5NzE0BGdycElk
AzE4MDM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARzZWMDZnRyBHNsawNzdG5ncwRzdGltZQMxMjE0MTcyMTg3
[16] mailto:AT_Sprint-digest@yahoogroups.com?subject=Email Delivery:
Digest
[17]
http://groups.yahoo.com/group/AT_Sprint;_ylc=X3oDMTJlNTQ2dDF2BF9TAzk3MzU5NzE0BGdycElkAzE4M
DM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARzZWMDZnRyBHNsawNocGYEc3RpbWUDMTIxNDE3MjE4Nw--
[18] http://docs.yahoo.com/info/terms/
[19] mailto:AT_Sprint-unsubscribe@yahoogroups.com?subject=
[20]
http://groups.yahoo.com/group/AT_Sprint/members;_ylc=X3oDMTJnNTNxbDZsBF9TAzk3MzU5NzE0BGdyc
ElkAzE4MDM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARzZWMDdnRsBHNsawN2bWJycwRzdGltZQMxMjE0MTcyMTg3
[21]
http://groups.yahoo.com/group/AT_Sprint;_ylc=X3oDMTJmbGY3aDhoBF9TAzk3MzU5NzE0BGdycElkAzE4M

DM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARzZWMDdnRsBHNsawN2Z2hwBHN0aW1lAzEyMTQxNzIxODc-
[22]
http://us.ard.yahoo.com/SIG=13o25s4pm/M=493064.12016258.12582637.8674578/D=groups/S=1705063108:NC/Y=YAHOO/EXP=1214179387/L=/B=msgiEELaX9E-/J=1214172187921845/A=5191955/R=0/SIG=112mhte3e/*http://www.ygroupsblog.com/blog/
[23]
http://us.ard.yahoo.com/SIG=13of5il2s/M=493064.12016263.12445670.8674578/D=groups/S=1705063108:NC/Y=YAHOO/EXP=1214179387/L=/B=m8giEELaX9E-/J=1214172187921845/A=4836045/R=0/SIG=11o19ppl5/*http://advision.webevents.yahoo.com/dogzone/index.html
[24]
http://us.ard.yahoo.com/SIG=13o7a222i/M=493064.12016255.12445662.8674578/D=groups/S=1705063108:NC/Y=YAHOO/EXP=1214179387/L=/B=nMgiEELaX9E-/J=1214172187921845/A=4025321/R=0/SIG=12a352npd/*http://us.rd.yahoo.com/evt=44092/*http://smallbusiness.yahoo.com/r-index

3293. RE: [AT_Sprint] Re: FD 2008

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-24 18:42:16 UTC
From: Dale Putnam
Topic: 3274 Message: 3293

Hey.... if we work this right.... and if Murphy plays nice..
we could do an AT to AT to AT Q... at least a Qrp to Qrp to Qrp... maybe before it all kicks off...
Brian, I'm looking for the headphones,
Steve, I will be attempting a bit of a Q or two
with a mobile antenna too. Likely listening more than not.
Good luck to all,--... ...--Dale - WC7S in Wy

To: AT_Sprint@yahoogroups.comFrom: n0tu.qrp@...: Tue, 24 Jun 2008 15:27:54 +0100Subject: Re: [AT_Sprint] Re: FD 2008

> am somewhat embarassed by the huge chirp!> Brian K7REI'll make it all the easier to find you!I'll look for you Friday PM on 6m SSB/CW ...once I'm setup!=D Steve/n0tuOn Tue, Jun 24, 2008 at 3:03 PM, c6alk <K7RE@...> wrote:>> Dale:> Sure, would love to share results with you and all who might be> interested. I'll try and make a few HFPack type roving QSO's with> thw ATS3 on Friday before the contest begins on Saturday. I will also> be on 6M SSB with my ancient IC-502 QRP SSB rig. It will do CW, but I> am somewhat embarassed by the huge chirp!>> Brian K7RE>> --- In AT_Sprint@yahoogroups.com, Dale Putnam <daleputnam@...> wrote:>>>>>> Good Luck, Brian, and stay safe, have a blast.>> I am not sure if I will be on much at all, antenna work and stuff to> do, however,>> If I get on, it will be qrp, with the home antennas. Unless, I take> my 2nd harmonic fishing,>> then I'll be with a mobile screwdriver, qrp.>> We should swap lies after. or at least exchange reports. --...> ...--Dale - WC7S in Wy>>>>>> To: AT_Sprint@...: K7RE@...: Mon, 23 Jun 2008 15:17:36 +0000Subject:> [AT_Sprint] Re: FD 2008>>>>>>>>>> I will be doing a very laid back FD with W0WN. We plan to be QRP 1> or2B. I have 3 riding mower batteries charged up with solar power.> Therigs will be a K2 and a K-1. I will arrive Thursday night, so will> beplaying with the ATS3 prior to the FD event on Friday. We will be> inWY, at the Bear Lodge campground. This is located on a hill in NEWY.> With at least 2 QRP CW stations on, maybe folks will not> bedissapointed by not hearing WY in the event. Although SPC> multipliersdon't count in FD as we know, lot's of groups enjoy trying> to WAS. Brian K7RE--- In AT_Sprint@yahoogroups.com, "radio_kx0r"> <careyfuller@> wrote:>> --- In AT_Sprint@yahoogroups.com, <jpkeon@>> wrote:> > All,> > KX0R will be operating 1B Battery/QRP in the> Medicine Bow Forest of > SE Wyoming at 7800 feet elevation for FD next> weekend.> > I plan to operate 40, 20, and 15 meters, and perhaps 80,> 10, and 6M > if conditions are favorable. There's a chance I'll be on> the air by > Friday night.> > This morning I charged up a couple of> batteries with my solar panel.> > Hope to work some of you!> > 72> >> Carey> KX0R> > > I already posted to some of you and I wanted to add> these for your > viewing.> > > > We will be operating WQ4RP and with> our own callsigns on the FD > event this coming weekend from Black> Balsam Ridge and Sam's Knob. > > > >> http://jblevins.org/photos/artloeb/> > > > I will be operating QRP of> course and will be using the handkey for > part of the time. > > > > I> look forward to making contact with those of you on the air. We > will> be on the HF bands on and off as the bands allow up there.> > > > For> those interested we will also be using 2m/70cm/6m with our > beams> from the top (6,214 feet) and hope to do well this year with > the> addition of the new bands for us.> > > > JohnPaul/AB4PP> > SKCC #> 0032, EPA, AT> >>>>>>>>>>>>>>>>

_____>> Introducing Live Search cashback . It's search that pays you back!>>> http://search.live.com/cashback/?&pkw=form=MIJAAF/publ=HMTGL/crea=introsrchcashback>>>>>> ----------->> Yahoo! Groups Links>>>>

_____
Introducing Live Search cashback . It's search that pays you back!
http://search.live.com/cashback/?&pkw=form=MIJAAF/publ=HMTGL/crea=introsrchcashback

3294. SSB reception

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-24 23:50:27 UTC
From: Stephen Wandling
Topic: 3294 Message: 3294

This probably won't be news to many of you ATS owners, but my understanding that you can't copy SSB on the ATS has been shattered. I fell asleep on the UP button while tuning 40M and flashed by something. Backing up I found an Alberta SSB Net in progress. The copy was poor, primarily because of the tight filtering on this rig. But parts of it were quite readable.

I gather that the 'wrong sideband' doesn't apply to 40M? Does it only apply to 80M? If this has been covered in other posts, please point me to them. My interest is being able to check in to SSB nets with CW. One question I have is: "Is there a safe and easy way to bypass the filtering enough to enhance SSB reception?".

72
Stephen
VE7NSD

3295. Re: [AT_Sprint] SSB reception

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-25 00:04:56 UTC
From: JT Croteau
Topic: 3294 Message: 3295

Steve, you'll appreciate this video:

http://www.flickr.com/photos/jonathancharles/2435696893/in/set-72157602077258104/

--
JT Croteau, N1ESE

3296. Re: [AT_Sprint] SSB reception

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-25 00:13:08 UTC
From: WA0ITP
Topic: 3294 Message: 3296

Hi Stephen,

Go to Wide on the AST3 and you can work cross mode just fine on 40. But not on the A or B, they do note have the wide filter setting. The filters is wide enough for double sideband and the freq readout will be indicate 600 cycles lower than the transmitted signal.

Thats one reason I've kept my 3...

I love this radio stuff !
72, 73 Terry, WAØITP
www.wa0dx.org/wa0itp
www.4sqrp.com
www.hams4u.com
www.qrpspots.com

----- Original Message -----
From: Stephen Wandling
To: AT_Sprint@yahoogroups.com
Sent: Tuesday, June 24, 2008 6:50 PM
Subject: [AT_Sprint] SSB reception

This probably won't be news to many of you ATS owners, but my
understanding that you can't copy SSB on the ATS has been shattered. I
fell asleep on the UP button while tuning 40M and flashed by something.
Backing up I found an Alberta SSB Net in progress. The copy was poor,
primarily because of the tight filtering on this rig. But parts of it
were quite readable.

I gather that the 'wrong sideband' doesn't apply to 40M? Does it only
apply to 80M? If this has been covered in other posts, please point me
to them. My interest is being able to check in to SSB nets with CW.
One question I have is: "Is there a safe and easy way to bypass the
filtering enough to enhance SSB reception?".

72
Stephen
VE7NSD

No virus found in this incoming message.
Checked by AVG.
Version: 7.5.524 / Virus Database: 270.4.1/1515 - Release Date: 6/23/2008 7:16 PM

3297. Re: [AT_Sprint] SSB reception

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-25 00:20:42 UTC
From: Stephen Wandling
Topic: 3294 Message: 3297

Terry,

Is this a firmware thing? I came into the ATS world just recently, so I am not aware of the changes from one version to the next. Do you know how they accomplished the Wide filter setting? I know the B has both the IF crystal filter and an audio filter. The sound I was getting was very much like what I hear when I switch to SSB on my IC706 and forget to switch my Scaf filter off.

Is 40M the only band where this works on your ATS3?

72
Stephen
VE7NSD

WA0ITP wrote:
> *Hi Stephen,*
> **
> *Go to Wide on the AST3 and you can work cross mode just fine on 40.
> But not on the A or B, they do note have the wide filter setting. The
> filters is wide enough for double sideband and the freq readout will
> be indicate 600 cycles lower than the transmitted signal.*
> **
> *Thats one reason I've kept my 3...*
> ----------
> I love this radio stuff !
> 72, 73 Terry, WA?ITP
> www.wa0dx.org/wa0itp <http://www.wa0dx.org/wa0itp>
> www.4sqrp.com <http://www.4sqrp.com>
> www.hams4u.com <http://www.hams4u.com>
> www.qrpspots.com <http://www.qrpspots.com>
>
>
> ----- Original Message -----
> *From:* Stephen Wandling <mailto:swandling@...>
> *To:* AT_Sprint@yahoogroups.com <mailto:AT_Sprint@yahoogroups.com>
> *Sent:* Tuesday, June 24, 2008 6:50 PM
> *Subject:* [AT_Sprint] SSB reception
>
> This probably won't be news to many of you ATS owners, but my
> understanding that you can't copy SSB on the ATS has been
> shattered. I
> fell asleep on the UP button while tuning 40M and flashed by
> something.
> Backing up I found an Alberta SSB Net in progress. The copy was poor,
> primarily because of the tight filtering on this rig. But parts of it

> were quite readable.
>
> I gather that the 'wrong sideband' doesn't apply to 40M? Does it only
> apply to 80M? If this has been covered in other posts, please
> point me
> to them. My interest is being able to check in to SSB nets with CW.
> One question I have is: "Is there a safe and easy way to bypass the
> filtering enough to enhance SSB reception?".
>
> 72
> Stephen
> VE7NSD
>
> ---
> No virus found in this incoming message.
> Checked by AVG.
> Version: 7.5.524 / Virus Database: 270.4.1/1515 - Release Date:
> 6/23/2008 7:16 PM
>
>

3298. Re: [AT_Sprint] SSB reception

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-25 00:27:48 UTC
From: Stephen Wandling
Topic: 3294 Message: 3298

Yep, that's about how it sounded. Like when I switch my IC706 to SSB
and forget to switch off my Scaf filter.

JT Croteau wrote:
> Steve, you'll appreciate this video:
>
> http://www.flickr.com/photos/jonathancharles/2435696893/in/set-72157602077258104/
>
>

3299. Re: [AT_Sprint] SSB reception

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-25 00:38:07 UTC
From: WA0ITP
Topic: 3294 Message: 3299

Yes it is, it's in the manual for ATS3, page 7, see below. Its the 8th menu item. .

Steve bypassed the IF filter for the Wide reception option in the first ATS3, but had to remove that feature in the A and B due to needing board space (and probably program bytes also) for other things. I think it is a good feature, and KL7R (SK) used it to check into 80M nets in Alaska..
He's the only builder I knew of that mounted his board "upside down" in the Altoids. He asked for a special label. He was a very nice man and an inventive ham. He left a big hole in hamdom..
http://kl7r.ham-radio.ch/

Have fun with these little rigs, they're special..

Wide Band Reception Mode: (W)

In Wide Band Reception mode, the IF crystal filter is bypassed. This results in double

side band reception. Both SSB and AM signal can be tuned in. In this mode, signals are zero

beaten at the BFO offset frequency. Return to narrow band CW reception by accessing this

option again.

NOTE: While in Wide Band Mode, the AFA will read 600 Hz low, as your now tuned to the

BFO oscillator offset frequency and this is not corrected for.

7

I love this radio stuff !
72, 73 Terry, WAØITP
www.wa0dx.org/wa0itp
www.4sqrp.com
www.hams4u.com
www.qrpspots.com

----- Original Message -----
From: Stephen Wandling
To: AT_Sprint@yahoogroups.com
Sent: Tuesday, June 24, 2008 7:20 PM
Subject: Re: [AT_Sprint] SSB reception

Terry,

Is this a firmware thing? I came into the ATS world just recently, so I
am not aware of the changes from one version to the next. Do you know

how they accomplished the Wide filter setting? I know the B has both
the IF crystal filter and an audio filter. The sound I was getting was
very much like what I hear when I switch to SSB on my IC706 and forget
to switch my Scaf filter off.

Is 40M the only band where this works on your ATS3?

72
Stephen
VE7NSD

WA0ITP wrote:
> *Hi Stephen,*
> **
> *Go to Wide on the AST3 and you can work cross mode just fine on 40.
> But not on the A or B, they do note have the wide filter setting. The
> filters is wide enough for double sideband and the freq readout will
> be indicate 600 cycles lower than the transmitted signal.*
> **
> *Thats one reason I've kept my 3...*
> ----------
> I love this radio stuff !
> 72, 73 Terry, WAØITP
> www.wa0dx.org/wa0itp <http://www.wa0dx.org/wa0itp>
> www.4sqrp.com <http://www.4sqrp.com>
> www.hams4u.com <http://www.hams4u.com>
> www.qrpspots.com <http://www.qrpspots.com>
>
>
> ----- Original Message -----
> *From:* Stephen Wandling <mailto:swandling@...>
> *To:* AT_Sprint@yahoogroups.com <mailto:AT_Sprint@yahoogroups.com>
> *Sent:* Tuesday, June 24, 2008 6:50 PM
> *Subject:* [AT_Sprint] SSB reception
>
> This probably won't be news to many of you ATS owners, but my
> understanding that you can't copy SSB on the ATS has been
> shattered. I
> fell asleep on the UP button while tuning 40M and flashed by
> something.
> Backing up I found an Alberta SSB Net in progress. The copy was poor,
> primarily because of the tight filtering on this rig. But parts of it
> were quite readable.
>
> I gather that the 'wrong sideband' doesn't apply to 40M? Does it only
> apply to 80M? If this has been covered in other posts, please
> point me
> to them. My interest is being able to check in to SSB nets with CW.
> One question I have is: "Is there a safe and easy way to bypass the
> filtering enough to enhance SSB reception?".
>

> 72
> Stephen
> VE7NSD
>
> ---
> No virus found in this incoming message.
> Checked by AVG.
> Version: 7.5.524 / Virus Database: 270.4.1/1515 - Release Date:
> 6/23/2008 7:16 PM
>
>

No virus found in this incoming message.
Checked by AVG.
Version: 7.5.524 / Virus Database: 270.4.1/1515 - Release Date: 6/23/2008 7:16 PM

3300. Re:Re: [AT_Sprint] SSB receptio n

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-25 07:56:35 UTC
From: J. Haynes
Topic: 3300 Message: 3300

Gosh, that wide reception, with Mike's FB firmware set on "scan"-that'd be on everybody's wishlist.
Jonathan KC7FYS

3301. Re: SSB reception

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-25 13:07:44 UTC
From: scott mcmullen
Topic: 3294 Message: 3301

--- In AT_Sprint@yahoogroups.com, Stephen Wandling <swandling@...> wrote:
>
> This probably won't be news to many of you ATS owners, but my
> understanding that you can't copy SSB on the ATS has been shattered.

Yes, I have an AT Sprint 3 (not the "A" or "B" version).

The 'W' menu item disables the narrow passband filter, and makes
it possible to hear SSB signals very easily. I used that feature
on a few occasions to check into the Texas Traffic Net, an 80m
SSB net. The feature works very well.

The Elecraft KX-1 has this feature, also.

I think that feature could be very useful for ARES-type
operationing, or backpacking.

73
Scott
W5ESE

3302. Re: [AT_Sprint] Re: SSB reception

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-25 14:49:30 UTC
From: Michael Harnage
Topic: 3294 Message: 3302

Regarding SSB reception and cross mode operation with ATS rigs.

The ATS3 does support cross mode operation and SSB reception. It did this by doing two things.

FIRST: It switched out the crystal filter providing for a wider bandwidth to allow listening more comfortably to SSB.

SECOND: It calculated where to transmit so that the SSB station could hear the signal.

Post ATS3 rigs don't have the capability to switch out the crystal filter and it's probably not a good idea to jumper them out as the impedance transitions (if that's a concept, hi hi) would be way out of whack. This is why the calculations to put the transmit on the correct freq while in wide mode no longer exist -- there is no wide mode.

Solution 1: One could add a wide mode that would do the calculations but not do the crystal bypassing. This would result in poor audio but cross mode would be possible.

Solution 2: Use xit mode (or split if using my f/w) and manually do the same thing as the calculations would do.

80M - set your Tx to 1200Hz lower than Rx
40M - do nothing, Tx already on the SSB signal
30M - no SSB here so ignore.
20M - set your Tx to 1200Hz higher than Rx
17M - set your Tx to 1200Hz higher than Rx
15M - set your Tx to 1200Hz higher than Rx

I think I've got this right...

-mike/w1mt

3303. Re: [AT_Sprint] Re: SSB reception

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-25 18:25:12 UTC
From: Stephen Wandling
Topic: 3294 Message: 3303

Hi Mike,

This is all pretty interesting to me.

You mention switching out the crystal filter. I don't know if it is a new addition for the latest version, but the 3B also has an audio filter. Do you feel that this also contributes to the poor SSB reception? I guess what I'm asking is whether switching out the crystal filter and leaving in the audio filter would actually result in readable SSB?

Thanks for the explanations and your work-around. I'm trying to get my head around why 40M already has the transmit on the SSB signal, and then transmit has to be 1200Hz lower on 80M. Can you shed some light on that please?

72
Stephen
VE7NSD

Michael Harnage wrote:
> Regarding SSB reception and cross mode operation with ATS rigs.
>
> The ATS3 does support cross mode operation and SSB reception. It did this by doing two things.
>
> FIRST: It switched out the crystal filter providing for a wider bandwidth to allow listening more comfortably to SSB.
>
> SECOND: It calculated where to transmit so that the SSB station could hear the signal.
>
> Post ATS3 rigs don't have the capability to switch out the crystal filter and it's probably not a good idea to jumper them out as the impedance transitions (if that's a concept, hi hi) would be way out of whack. This is why the calculations to put the transmit on the correct freq while in wide mode no longer exist -- there is no wide mode.
>
> Solution 1: One could add a wide mode that would do the calculations but not do the crystal bypassing. This would result in poor audio but cross mode would be possible.
>
> Solution 2: Use xit mode (or split if using my f/w) and manually do the same thing as the calculations would do.
>
> 80M - set your Tx to 1200Hz lower than Rx
> 40M - do nothing, Tx already on the SSB signal
> 30M - no SSB here so ignore.
> 20M - set your Tx to 1200Hz higher than Rx

> 17M - set your Tx to 1200Hz higher than Rx
> 15M - set your Tx to 1200Hz higher than Rx
>
> I think I've got this right...
>
> -mike/w1mt
>
>
>
>
> ---
>
> Yahoo! Groups Links
>
>
>
>
>

3304. Re: [AT_Sprint] Re: SSB reception

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-25 19:33:33 UTC
From: Michael Harnage
Topic: 3294 Message: 3304

--- On Wed, 6/25/08, Stephen Wandling <swandling@...> wrote:

> Do you feel that this also contributes to the poor
> SSB
> reception? I guess what I'm asking is whether
> switching out the crystal
> filter and leaving in the audio filter would actually
> result in readable
> SSB?

The ATS3 had basically the same audio filtering. Yes, switching out the crystal filter does make a difference in the quality of listening on that rig.

>
> I'm
> trying to get my
> head around why 40M already has the transmit on the SSB
> signal, and then
> transmit has to be 1200Hz lower on 80M. Can you shed some
> light on that
> please?

Fro the ATS rigs, the Rx offset for 80 is on the high side but the SSB is lower side, so you have to subtract 1200Hz (basically 2x 600Hz sidetone).

For the ATS rigs, the Rx offset for 40,30,20,17, and 15 meters is on the low side. On 40M the SSB is on the low side (same side). Therefore no change for Tx freq. While on 20,17 and 15 SSB is on the high side, therefore the need to add 1200Hz.

Hope this makes sense.

-mike/w1mt

3305. Touch Paddle Option for ATS-3B?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-25 23:42:32 UTC
From: Jeff T. Casey
Topic: 3305 Message: 3305

Hi gang,

Does the ATS-3B come with a no-moving-parts touch paddle, or is this available as an option from Steve or from some other vendor? Or is the touch paddle a device that people are building from scratch to go with their ATS-3Bs?

I also have a more general question about touch paddles: Is a special circuit required to convert the capacitance fluctuations picked up by the dit and dah contacts as one touches them into digital, binary form? If so, is this an active circuit, requiring a power source?

Thanks very much & 73,
Jeff
NE2J (formerly WB5GWB)

3306. Re: Touch Paddle Option for ATS-3B?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-25 23:50:34 UTC
From: kc7fys
Topic: 3305 Message: 3306

The Touchkeyer in mine was from
http://uk.youtube.com/watch?v=yqnt2zUpJcw , with photos of it here:
http://www.flickr.com/photos/jonathancharles/2291300160/

I am more on the non-technical side of this group--and I had no
problem installing it. Although it is not my main method of producing
CW from the ATS3B, it has save a couple QSO's when such-and-such
happened and I couldn't key with my NB6M PCB-board paddles.
I got on the cover of Make Blog and won a month of flickr pro
(audience chuckles) for uploading photos of it. I still have to lick
my thumb to make it work well beyond 92% of the time.

It fits nicely under the lid of your standard-issue Altoids mint tin.
Jonathan KC7FYS/7J1AWL

--- In AT_Sprint@yahoogroups.com, "Jeff T. Casey" <ne2j@...> wrote:
>
> Hi gang,
>
> Does the ATS-3B come with a no-moving-parts touch paddle, or is this
available as an option from Steve or from some other vendor? Or is
the touch paddle a device that people are building from scratch to go
with their ATS-3Bs?
>
> I also have a more general question about touch paddles: Is a
special circuit required to convert the capacitance fluctuations
picked up by the dit and dah contacts as one touches them into
digital, binary form? If so, is this an active circuit, requiring a
power source?
>
> Thanks very much & 73,
> Jeff
> NE2J (formerly WB5GWB)
>

3307. Re: [AT_Sprint] Touch Paddle Option for ATS-3B?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-26 00:20:40 UTC
From: Vojtěch Bubník
Topic: 3305 Message: 3307

Hi Jeff.

> Does the ATS-3B come with a no-moving-parts touch paddle, or is this available
> as an option from Steve or from some other vendor? Or is the touch paddle a
> device that people are building from scratch to go with their ATS-3Bs?

It was discussed here couple of times. You could either build it from scratch or buy a kit from http://www.cwtouchkeyer.com/.
The chips he is using are QT-113H. If you buy two of QT-113 non-H chips, you will save two 2n7000 FETs. Just build the circuit according to the datasheet. Also the circuit generates short "hartbeat" pulses on the output line. I believe they are filtered out by 2n7000 high gate capacity in cwtouchkeyer.com construction. The pulses are filtered out by debouncing capacitors in ATS-3.

I built mine on a piece of prefoboard and glued it next to the antenna connector. You will find the picture in photos section of this group. The sensitivity is dependent on the capacity of paddle contacts to ground. If you glue pieces of PCB right on the tin like Johnatan did, the zero capacity will be very high and the circuit sensitivity will not be sufficient. I decreased the zero capacity by placing a piece of plastic between the electrodes and tin.

> I also have a more general question about touch paddles: Is a special circuit
> required to convert the capacitance fluctuations picked up by the dit and dah
> contacts as one touches them into digital, binary form? If so, is this an
> active circuit, requiring a power source?

It is a pretty smart circuit, that measures capacity and compares it to a long time average. Therefore it calibrate itself.

73, Vojtech OK1IAK, AB2ZA

3308. Re: [AT_Sprint] Re: SSB reception

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-26 01:00:26 UTC
From: Stephen Wandling
Topic: 3294 Message: 3308

Michael,

Thank you for the clear explanation. Its important to me to know as
much as possible about what is happening within this rig when I am using it.

For research purposes, I have downloaded the PDF for the ATS3 (non A or
B)? I will see what I can learn by comparing circuits.

72
Stephen
VE7NSD

Michael Harnage wrote:
> --- On Wed, 6/25/08, Stephen Wandling <swandling@...> wrote:
>
>
>> Do you feel that this also contributes to the poor
>> SSB
>> reception? I guess what I'm asking is whether
>> switching out the crystal
>> filter and leaving in the audio filter would actually
>> result in readable
>> SSB?
>>
>
> The ATS3 had basically the same audio filtering. Yes, switching out the crystal filter
does make a difference in the quality of listening on that rig.
>
>
>> I'm
>> trying to get my
>> head around why 40M already has the transmit on the SSB
>> signal, and then
>> transmit has to be 1200Hz lower on 80M. Can you shed some
>> light on that
>> please?
>>
>
> Fro the ATS rigs, the Rx offset for 80 is on the high side but the SSB is lower side, so
you have to subtract 1200Hz (basically 2x 600Hz sidetone).
>
> For the ATS rigs, the Rx offset for 40,30,20,17, and 15 meters is on the low side. On 40M
the SSB is on the low side (same side). Therefore no change for Tx freq. While on 20,17 and
15 SSB is on the high side, therefore the need to add 1200Hz.
>
> Hope this makes sense.

>
> -mike/w1mt
>
>
>
>
>
>
> ---
>
> Yahoo! Groups Links
>
>
>
>
>

3309. Re: Touch Paddle Option for ATS-3B?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-26 01:11:30 UTC
From: list2
Topic: 3305 Message: 3309

Jeff,
I have some info at:
http://pituch.net/p/Steve's%20Page/Radio/SW40+/SW40+.html
The chips are very reliable. You can even use gloves with thiem.

Steve, W2MY

----- Original Message -----
From: "Jeff T. Casey" <ne2j@...>
To: <AT_Sprint@yahoogroups.com>
Sent: Wednesday, June 25, 2008 6:42 PM
Subject: [AT_Sprint] Touch Paddle Option for ATS-3B?

> Hi gang,
>
> Does the ATS-3B come with a no-moving-parts touch paddle, or is this
> available as an option from Steve or from some other vendor? Or is the
> touch paddle a device that people are building from scratch to go with
> their ATS-3Bs?
>
> I also have a more general question about touch paddles: Is a special
> circuit required to convert the capacitance fluctuations picked up by the
> dit and dah contacts as one touches them into digital, binary form? If
> so, is this an active circuit, requiring a power source?
>
> Thanks very much & 73,
> Jeff
> NE2J (formerly WB5GWB)
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>

No virus found in this incoming message.
Checked by AVG.
Version: 8.0.100 / Virus Database: 270.4.1/1519 - Release Date: 6/25/2008
4:13 PM

3310. Re: [AT_Sprint] Re: SSB reception

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-26 02:40:57 UTC
From: Stephen Wandling
Topic: 3294 Message: 3310

Here is my research report after studying the ATS3 and ATS3-B receiver circuits. Nothing much seems to have changed in the crystal filter, with the exception that the series input/output capacitors have been changed from 150pF to 100pf (in the B). The output of the first mixer was an IF transformer and now is a choke.

The switching was done with two SPDT Analog Switches in series. The switches switch out the crystal filter and insert a 22pF capacitor in its place. The Analog Switches are controlled by the Sidetone, which I have to assume is turned on by selecting Wide mode. You do not hear the sidetone in the audio out when receiving, because Mute is not on.

Steve used two Analog Switches in series because he did not get sufficient isolation with only one. It would appear to be simple enough to simply install a manual SPDT switch to replicate the action of the Analog Switches. It would involve a 22pF cap and the switch. Modifying the board to accept this switching may not be trivial. The frequency offset required for each band would have to be set manually with XIT as Michael has outlined below.

Unqualified concerns I have are in regard to possible problems surrounding the leads from the board to the switch. Might they pick up unwanted signals and cause distortion?

Another approach would be to basically replicate Steve's original two Analog Switches and control them through the Sidetone as was done previously. This would entail a very small sub board and modification to the firmware. If a firmware mod was undertaken to do this, it would make sense to also include the frequency offset function that was described below.

Well, that's what I have learned and what I have seen as possible avenues to get this capability with the ATS3-B. I am open to corrections and other ideas. I'm severely tempted to shunt the crystal filter with a 22pF cap while tuned to a SSB signal and see what happens. Only fear keeps me from doing this. :-) Maybe after FD?

72
Stephen
VE7NSD

Stephen Wandling wrote:
> Michael,
>
> Thank you for the clear explanation. Its important to me to know as
> much as possible about what is happening within this rig when I am
> using it.

>
> For research purposes, I have downloaded the PDF for the ATS3 (non A
> or B)? I will see what I can learn by comparing circuits.
>
> 72
> Stephen
> VE7NSD
>
> Michael Harnage wrote:
>> --- On Wed, 6/25/08, Stephen Wandling <swandling@...> wrote:
>>
>>
>>> Do you feel that this also contributes to the poor
>>> SSB reception? I guess what I'm asking is whether
>>> switching out the crystal filter and leaving in the audio filter
>>> would actually
>>> result in readable SSB?
>>>
>>
>> The ATS3 had basically the same audio filtering. Yes, switching out
>> the crystal filter does make a difference in the quality of listening
>> on that rig.
>>
>>
>>> I'm
>>> trying to get my head around why 40M already has the transmit on the
>>> SSB
>>> signal, and then transmit has to be 1200Hz lower on 80M. Can you
>>> shed some
>>> light on that please?
>>>
>>
>> Fro the ATS rigs, the Rx offset for 80 is on the high side but the
>> SSB is lower side, so you have to subtract 1200Hz (basically 2x 600Hz
>> sidetone).
>>
>> For the ATS rigs, the Rx offset for 40,30,20,17, and 15 meters is on
>> the low side. On 40M the SSB is on the low side (same side).
>> Therefore no change for Tx freq. While on 20,17 and 15 SSB is on the
>> high side, therefore the need to add 1200Hz.
>>
>> Hope this makes sense.
>>
>> -mike/w1mt
>>
>>
>>
>>
>>
>>
>> ------------------------------------

>>
>> Yahoo! Groups Links
>>
>>
>>
>>
>>
>

3311. RE: [AT_Sprint] Touch Paddle Option for ATS-3B?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-26 02:42:51 UTC
From: Dale Putnam
Topic: 3305 Message: 3311

Hi folks,
I want to mention a thought, when thinking about mounting the touch keyer kit, you may consider any other add on circuits, or items, like a surface mount speaker. So... mounting the keyer kit, close to the edge of the lid, and above the switches, would improve the chances for mounting additional things... like a 2.5 watt ic audio amp... with vol contol. I'm investigating a speaker too. Haven't gotten there yet, tho.
--... ...--Dale - WC7S in Wy

_____
Introducing Live Search cashback . It's search that pays you back!
http://search.live.com/cashback/?&pkw=form=MIJAAF/publ=HMTGL/crea=introsrchcashback

3312. Store the adjusted ref. osc. frequency

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-27 12:27:39 UTC
From: la5toa
Topic: 3312 Message: 3312

Hi. My rig is now operational, and with 12Volt it gives 4.7Watt output
at 80meter, and that is 70.6 % power efficiency :-)

The only problem I noticed during calibrating of the ref. osc. freq.
at 10MHz, is that it will not store after adjustment clicking "menu".

The osc. ref. freq. is default almost there, but if anyone can see
what is the "store/save"problem, please let me know.

72,
Tore, LA5TOA
Norway

3313. Re: [AT_Sprint] ATS 3B For Sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-27 16:57:24 UTC
From: Klaus.Moehr@t-online.de
Topic: 3277 Message: 3313

Hi Dennis,

I am vy interested let me know , if available and if so tell me the
details.

Best wishes de Klaus DM4TJ

have a nice weekend

Date: Mon, 23 Jun 2008 00:03:05 +0200
Subject: [AT_Sprint] ATS 3B For Sale
From: "g6ybc" <g6ybc@...>
To: AT_Sprint@yahoogroups.com

? ? ? ? ? ? ? ? ? ? ? ? ?

Hi All

My unbuilt 3B kit is up for sale. Still un-packed, as I received it
from Steve.

With all the things going on, I just don't have the time to build.

Original price $190 (?98.00 GBP) shipped UK mainland UK. Postage
at cost else where.

Contact me off list for further details.

Best regards

Dennis G6YBC

? ? ? ? ? ? ? ? ? ? ? ? ? ? ?

Links:
------
[1]
http://groups.yahoo.com/group/AT_Sprint/message/3277;_ylc=X3oDMTM1Mm80cGlhBF9TAzk3MzU5NzE0
BGdycElkAzE4MDM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARtc2dJZAMzMjc3BHNlYwNmdHIEc2xrA3Z0cGMEc3RpbW
UDMTIxNDE3MjE4NwR0cGNJZAMzMjc3
[2]
http://groups.yahoo.com/group/AT_Sprint/post;_ylc=X3oDMTJxbGFmNWk2BF9TAzk3MzU5NzE0BGdycElk
AzE4MDM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARtc2dJZAMzMjc3BHNlYwNmdHIEc2xrA3JwbHkEc3RpbWUDMTIxND
E3MjE4Nw--?act=reply&messageNum=3277
[3]
http://groups.yahoo.com/group/AT_Sprint/post;_ylc=X3oDMTJmY2YwZmw0BF9TAzk3MzU5NzE0BGdycElk
AzE4MDM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARzZWMDZnRyBHNsawNudHBjBHN0aW1lAzEyMTQxNzIxODc-
[4]

http://groups.yahoo.com/group/AT_Sprint/messages;_ylc=X3oDMTJmdWtmZW9qBF9TAzk3MzU5NzE0BGdy
cElkAzE4MDM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARzZWMDZnRyBHNsawNtc2dzBHN0aW1lAzEyMTQxNzIxODc-
[5]
http://groups.yahoo.com/group/AT_Sprint/files;_ylc=X3oDMTJnZDQ5NzJqBF9TAzk3MzU5NzE0BGdycEl
kAzE4MDM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARzZWMDZnRyBHNsawNmaWxlcwRzdGltZQMxMjE0MTcyMTg3
[6]
http://groups.yahoo.com/group/AT_Sprint/photos;_ylc=X3oDMTJmOW1lYzlqBF9TAzk3MzU5NzE0BGdycE
lkAzE4MDM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARzZWMDZnRyBHNsawNwaG90BHN0aW1lAzEyMTQxNzIxODc-
[7]
http://groups.yahoo.com/group/AT_Sprint/links;_ylc=X3oDMTJncHM1MXY1BF9TAzk3MzU5NzE0BGdycEl
kAzE4MDM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARzZWMDZnRyBHNsawNsaW5rcwRzdGltZQMxMjE0MTcyMTg3
[8]
http://groups.yahoo.com/group/AT_Sprint/database;_ylc=X3oDMTJkaTBhNTk3BF9TAzk3MzU5NzE0BGdy
cElkAzE4MDM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARzZWMDZnRyBHNsawNkYgRzdGltZQMxMjE0MTcyMTg3
[9]
http://groups.yahoo.com/group/AT_Sprint/polls;_ylc=X3oDMTJncWhwNWJoBF9TAzk3MzU5NzE0BGdycEl
kAzE4MDM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARzZWMDZnRyBHNsawNwb2xscwRzdGltZQMxMjE0MTcyMTg3
[10]
http://groups.yahoo.com/group/AT_Sprint/members;_ylc=X3oDMTJmZDBocDBhBF9TAzk3MzU5NzE0BGdyc
ElkAzE4MDM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARzZWMDZnRyBHNsawNtYnJzBHN0aW1lAzEyMTQxNzIxODc-
[11]
http://groups.yahoo.com/group/AT_Sprint/calendar;_ylc=X3oDMTJlNzdoMTgwBF9TAzk3MzU5NzE0BGdy
cElkAzE4MDM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARzZWMDZnRyBHNsawNjYWwEc3RpbWUDMTIxNDE3MjE4Nw--
[12]
http://us.ard.yahoo.com/SIG=13r98h2ge/M=624381.12730922.13032918.10835568/D=groups/S=17050
63108:MKP1/Y=YAHOO/EXP=1214179387/L=/B=mcgiEELaX9E-/J=1214172187921845/A=5396680/R=0/SIG=1
4e7adlkt/*http://media.adrevolver.com/adrevolver/href?banner=197791&place=26143&url_=http:
//tc.deals.yahoo.com/tc/blockbuster/display.com?cid=bbi00027

[13]
http://us.ard.yahoo.com/SIG=13r98h2ge/M=624381.12730922.13032918.10835568/D=groups/S=17050
63108:MKP1/Y=YAHOO/EXP=1214179387/L=/B=mcgiEELaX9E-/J=1214172187921845/A=5396680/R=1/SIG=1
4e7adlkt/*http://media.adrevolver.com/adrevolver/href?banner=197791&place=26143&url_=http:
//tc.deals.yahoo.com/tc/blockbuster/display.com?cid=bbi00027

[14]
http://groups.yahoo.com/;_ylc=X3oDMTJlcmI5aWpzBF9TAzk3MzU5NzE0BGdycElkAzE4MDM1NzIzBGdycHNw
SWQDMTcwNTA2MzEwOARzZWMDZnRyBHNsawNnZnAEc3RpbWUDMTIxNDE3MjE4Nw--
[15]
http://groups.yahoo.com/group/AT_Sprint/join;_ylc=X3oDMTJncjhxZzVwBF9TAzk3MzU5NzE0BGdycElk
AzE4MDM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARzZWMDZnRyBHNsawNzdG5ncwRzdGltZQMxMjE0MTcyMTg3
[16] mailto:AT_Sprint-digest@yahoogroups.com?subject=Email Delivery:
Digest
[17]
http://groups.yahoo.com/group/AT_Sprint;_ylc=X3oDMTJlNTQ2dDF2BF9TAzk3MzU5NzE0BGdycElkAzE4M
DM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARzZWMDZnRyBHNsawNocGYEc3RpbWUDMTIxNDE3MjE4Nw--
[18] http://docs.yahoo.com/info/terms/
[19] mailto:AT_Sprint-unsubscribe@yahoogroups.com?subject=
[20]
http://groups.yahoo.com/group/AT_Sprint/members;_ylc=X3oDMTJnNTNxbDZsBF9TAzk3MzU5NzE0BGdyc
ElkAzE4MDM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARzZWMDdnRsBHNsawN2bWJycwRzdGltZQMxMjE0MTcyMTg3

[21]
http://groups.yahoo.com/group/AT_Sprint;_ylc=X3oDMTJmbGY3aDhoBF9TAzk3MzU5NzE0BGdycElkAzE4MDM1NzIzBGdycHNwSWQDMTcwNTA2MzEwOARzZWMDdnRsBHNsawN2Z2hwBHN0aW1lAzEyMTQxNzIxODc-
[22]
http://us.ard.yahoo.com/SIG=13o25s4pm/M=493064.12016258.12582637.8674578/D=groups/S=1705063108:NC/Y=YAHOO/EXP=1214179387/L=/B=msgiEELaX9E-/J=1214172187921845/A=5191955/R=0/SIG=112mhte3e/*http://www.ygroupsblog.com/blog/
[23]
http://us.ard.yahoo.com/SIG=13of5il2s/M=493064.12016263.12445670.8674578/D=groups/S=1705063108:NC/Y=YAHOO/EXP=1214179387/L=/B=m8giEELaX9E-/J=1214172187921845/A=4836045/R=0/SIG=11o19ppl5/*http://advision.webevents.yahoo.com/dogzone/index.html
[24]
http://us.ard.yahoo.com/SIG=13o7a222i/M=493064.12016255.12445662.8674578/D=groups/S=1705063108:NC/Y=YAHOO/EXP=1214179387/L=/B=nMgiEELaX9E-/J=1214172187921845/A=4025321/R=0/SIG=12a352npd/*http://us.rd.yahoo.com/evt=44092/*http://smallbusiness.yahoo.com/r-index

3314. Re: [AT_Sprint] Store the adjusted ref. osc. frequency

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-27 17:33:56 UTC
From: Stephen Wandling
Topic: 3312 Message: 3314

Tore,

Congratulations on getting such good performance from your rig. I'm sure you will enjoy this amazing transceiver.

Regarding the calibration not storing, you are having the same questions that I had. Apparently, the settings are stored. But, if you are like me and want to check, you might do the calibration again, expecting it to be as saved. But, I am told that each time you enter the calibration mode, the settings are reset to the default values. You just have to trust that they are saved! :-)

72
Stephen
VE7NSD

la5toa wrote:
> Hi. My rig is now operational, and with 12Volt it gives 4.7Watt output
> at 80meter, and that is 70.6 % power efficiency :-)
>
> The only problem I noticed during calibrating of the ref. osc. freq.
> at 10MHz, is that it will not store after adjustment clicking "menu".
>
> The osc. ref. freq. is default almost there, but if anyone can see
> what is the "store/save"problem, please let me know.
>
> 72,
> Tore, LA5TOA
> Norway
>
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>
>
>

3315. Re: Store the adjusted ref. osc. frequency

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-29 18:40:25 UTC
From: la5toa
Topic: 3312 Message: 3315

Thanks for your answer Stephen, that was good news for me.

I have used many hours (almost a year) soldering this tiny parts one after one..
Now I have to learn CW in proper speed..

Have a nice summer, and thanks again.

72,
Tore, LA5TOA

--- In AT_Sprint@yahoogroups.com, Stephen Wandling <swandling@...> wrote:
>
> Tore,
>
> Congratulations on getting such good performance from your rig. I'm
> sure you will enjoy this amazing transceiver.
>
> Regarding the calibration not storing, you are having the same questions
> that I had. Apparently, the settings are stored. But, if you are like
> me and want to check, you might do the calibration again, expecting it
> to be as saved. But, I am told that each time you enter the calibration
> mode, the settings are reset to the default values. You just have to
> trust that they are saved! :-)
>
> 72
> Stephen
> VE7NSD
>
> la5toa wrote:
> > Hi. My rig is now operational, and with 12Volt it gives 4.7Watt output
> > at 80meter, and that is 70.6 % power efficiency :-)
> >
> > The only problem I noticed during calibrating of the ref. osc. freq.
> > at 10MHz, is that it will not store after adjustment clicking "menu".
> >

> > The osc. ref. freq. is default almost there, but if anyone can
see
> > what is the "store/save"problem, please let me know.
> >
> > 72,
> > Tore, LA5TOA
> > Norway

3316. QBSA instability

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-06-30 20:07:56 UTC
From: ak3f
Topic: 3316 Message: 3316

i'm using my 3b with a qbsa. the frequency counter function used to work very well and was stable. over the last few months of operation, however, the qbsa's ability to lock on and present a stable display has been getting progressively worse on the higher bands (15 and 17). over the weekend it really became a nuisance on 15, jumping 10's of khz at a time. no problems on other bands.

i wonder if anybody has seen anything similar. any insight is greatly appreciated.

thanks,
mike - ak3f

3317. Re: SSB reception

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-01 21:33:52 UTC
From: w1mt
Topic: 3294 Message: 3317

I think I should clarify. :)

Only if you bypass the IF filter and tune the SSB signal so that you can hear it clearly will the offsets given below work. 40M is the special case. If you can hear the SSB signal on 40M in the IF passband of the ATS rig, your transmit freq will be OK for the other station to hear you. (By changing the firmware one can make 80M do this as well.)

I really should have combined Solution 1 + Solution 2 below. You can't do Solution 2 with out Solution 1 except on 40m.

-mike/w1mt

--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:
>
> Regarding SSB reception and cross mode operation with ATS rigs.
>
> The ATS3 does support cross mode operation and SSB reception. It did this by doing two things.
>
> FIRST: It switched out the crystal filter providing for a wider bandwidth to allow listening more comfortably to SSB.
>
> SECOND: It calculated where to transmit so that the SSB station could hear the signal.
>
> Post ATS3 rigs don't have the capability to switch out the crystal filter and it's probably not a good idea to jumper them out as the impedance transitions (if that's a concept, hi hi) would be way out of whack. This is why the calculations to put the transmit on the correct freq while in wide mode no longer exist -- there is no wide mode.
>
> Solution 1: One could add a wide mode that would do the calculations but not do the crystal bypassing. This would result in poor audio but cross mode would be possible.
>
> Solution 2: Use xit mode (or split if using my f/w) and manually do the same thing as the calculations would do.
>
> 80M - set your Tx to 1200Hz lower than Rx
> 40M - do nothing, Tx already on the SSB signal
> 30M - no SSB here so ignore.
> 20M - set your Tx to 1200Hz higher than Rx
> 17M - set your Tx to 1200Hz higher than Rx
> 15M - set your Tx to 1200Hz higher than Rx
>

> I think I've got this right...
>
> -mike/w1mt
>

3318. FD '08 on 2-Scoops of Grain

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-01 22:55:32 UTC
From: Steve Galchutt
Topic: 3318 Message: 3318

Kinda off topic but I had the ATS along as back up??

Field Day 2008 via QRP, Goats and Solar power was PRICELESS!

Although Es openings on 6m were not abundant if at all at least HF performed pretty darn good considering a SF of only 66! Location was our usual favorite spot a top Mt Herman at 9054' ASL with 1500' shear drop off looking East. Weather was a perfect 70F and sunny with a light shower on Saturday PM.

Maybe it was my location and/or antenna but I felt like I was running QRO as I could easily get through on the first or more often the second call on CW ...most of the time. But SSB was a different story and required more skill, timing and strategy. Calling loud stations or stations that were going unanswered or in the clear. 20m was the most productive and 40m late PM was rolling thunder with lots of big signals.

Goats did their part of getting our nearly 100lbs of FD/camping gear to the mountain top but were very unimpressed with the FD activities and napped most of the weekend. Between the rain, wind/tarps, camping chores and goat sitting I only made 150 QSOs (120-CW and 30-SSB) but it still made for a unforgettably FUN FD!

N0TU (1B)Station setup:
Rig: FT-817, ATS3A as backup
Ant: 10-40m jumper dipole w/40' coax at 25' at edge of cliff, 2m/70cm 5el Elks beam
Power source: (2) 7AH SLA batteries & solar panel
Price to get there: 2-scoops of gain and Rooster & Peanut (goats) ...not bad considering the price of gas these days! In other words, PRICELESS!

Cheers, Rooster & Peanut (and OG Steve/n0tu)
http://n0tu.blogspot.com/

YouTube video tells the rest of the story:
http://www.youtube.com/watch?v=pX2r0ddUqsw
Note: it's mostly about the goats and FD camping!

3319. Battery read out problems

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-02 12:25:13 UTC
From: Andreas Burkart
Topic: 3319 Message: 3319

Folks,

My battery read out function doesn't work correctly ! It basically shows the same read out over a wide range of different battery voltages (6,9,12V).

I wonder where I could start trouble shooting ?

Thank you for your help.

Andreas
KG4PYP

3320. Re: [AT_Sprint] Battery read out problems

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-02 13:29:16 UTC
From: Michael Harnage
Topic: 3319 Message: 3320

What is the readout?

Who's and what version of firmware are you using?

-mike/w1mt

--- On Wed, 7/2/08, Andreas Burkart <kg4pyp@...> wrote:

> From: Andreas Burkart <kg4pyp@...>
> Subject: [AT_Sprint] Battery read out problems
> To: AT_Sprint@yahoogroups.com
> Date: Wednesday, July 2, 2008, 1:25 PM
> Folks,
>
> My battery read out function doesn't work correctly !
> It basically
> shows the same read out over a wide range of different
> battery
> voltages (6,9,12V).
>
> I wonder where I could start trouble shooting ?
>
> Thank you for your help.
>
>
> Andreas
> KG4PYP
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>

3321. Re: Battery read out problems

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-03 18:10:18 UTC
From: Dave
Topic: 3319 Message: 3321

The components associated with reading the battery voltage are R45, R46 and pin 19 of the processor. The problem is probably around those, since I don't think you could upset the voltage feeding the processor enough to cause a problem for its internal reference without causing the processor to stop working altogether.

I would expect a problem with this circuit to manifest itself as always near maximum voltage (20.4V?), always near zero volts, or some reading in roughly constant proportion to the actual voltage.

Dave, WA3OFF

3322. Altoids Tins in Overdrive

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-04 03:57:05 UTC
From: kc7fys
Topic: 3322 Message: 3322

For those of you who missed this over on QRP-L. Here's how to really fancy-up an altoids tin.
http://steampunkworkshop.com/altoid-etch.shtml
Jonathan KC7FYS/7J1AWL

3323. RE: [AT_Sprint] Yes, I'm back...

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-06 14:47:33 UTC
From: Ken Lotts
Topic: 3230 Message: 3323

Still looking forward to the new code...

-----Original Message-----
From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com]On Behalf Of Ken Lotts
Sent: Monday, June 16, 2008 7:37 PM
To: AT_Sprint@yahoogroups.com
Subject: RE: [AT_Sprint] Yes, I'm back...

Looking forward to the new code...
Thanks!

-----Original Message-----
From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com]On Behalf Of kd1jv
Sent: Sunday, June 15, 2008 7:28 PM
To: AT_Sprint@yahoogroups.com
Subject: [AT_Sprint] Yes, I'm back...

Hi Gang, sorry it took me a while to check in after I got back from the hike. Other than a little chest cold the last week of the trip, it was great.

Since I got back, I finally discovered why my implentation of iambic B mode is so difficult to use. I'd been detecting the "both paddles closed" condition at the begining of a space between code elements. Turns out this is too soon. I have changed it to make the test at the end of a space and this works much better. Now there is much less chance of getting an extra element when you don't want one. I'll up load the new code with this chanage to the files section soon.

If any of you have one of the new PFR-3 rigs (which you might have noticed is basically an ATS rig on steriods)I made the same mistake there and have new firmware for the rig which I'd be happy to reprogam your MEGA48 with. (It also has some new features in it and fixes a couple of other minor bugs)

I do have some more ATS-3B's kitted up, but found I'm sort of some parts so will have to order them (tomorrow hopefully) to complete the run.

3324. Congrats to KD1JV

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-11 16:14:33 UTC
From: Hank Greeb
Topic: 3324 Message: 3324

For those who aren't ARRL Members, you're missing a GREAT article by Steven Weber, KD1JV, in QST, August 2008, page 33ff.

Very well done article. For those who are members, lettuce vote for this article to be the ARRL Cover Plaque Award - it's a members-only page, http://www.arrl.org/members-only/qstvote.html

Note that Steve describes how to construct this for <$50 "dead bug" style, but it might be worthwhile to think about the Hendricks kit version - which contains all the parts plus a nice cabinet. See http://www.qrpkits.com/mmr40.html for details.

Note that I have no commercial interest in this article nor in Hendricks QRP Kits.

72/73 de n8xx Hg

3325. Re: [AT_Sprint] Congrats to KD1JV

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-11 16:52:24 UTC
From: WA0ITP
Topic: 3324 Message: 3325

Still waiting for the August edition yet here in SE Iowa.

I love this radio stuff !
72, 73 Terry, WA?ITP
www.wa0dx.org/wa0itp
www.4sqrp.com
www.hams4u.com
www.qrpspots.com

----- Original Message -----
From: "Hank Greeb" <n8xx@...>
To: "Steven Weber" <kd1jv@...>;
<AT_Sprint@yahoogroups.com>
Sent: Friday, July 11, 2008 11:14 AM
Subject: [AT_Sprint] Congrats to KD1JV

|
| For those who aren't ARRL Members, you're missing a GREAT
article by
| Steven Weber, KD1JV, in QST, August 2008, page 33ff.
|
| Very well done article. For those who are members,
lettuce vote for
| this article to be the ARRL Cover Plaque Award - it's a
members-only
| page, http://www.arrl.org/members-only/qstvote.html
|
| Note that Steve describes how to construct this for <$50
"dead bug"
| style, but it might be worthwhile to think about the
Hendricks kit
| version - which contains all the parts plus a nice
cabinet. See
| http://www.qrpkits.com/mmr40.html for details.
|
| Note that I have no commercial interest in this article
nor in Hendricks
| QRP Kits.
|
| 72/73 de n8xx Hg
|
| ---
|
| Yahoo! Groups Links
|

|
|
|
|
| --
| No virus found in this incoming message.
| Checked by AVG.
| Version: 7.5.524 / Virus Database: 270.4.7/1545 - Release
Date: 7/10/2008 6:43 PM
|
|

3326. ATS3B / High currant indication during tuning with a tuner

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-12 07:32:12 UTC
From: hb9tso
Topic: 3326 Message: 3326

Dear OMs

I have finshed my ATS3B, and he works sofare very good.

The only problem i have is: As soon i operate a tuner to matsch a antenna, the high current protection goes active. (@6 volts up to 13 volts.)

The avrg. current consumtion in TX mode is apprx.500mAmps.

3327. Firmware update

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-12 07:34:33 UTC
From: hb9tso
Topic: 3327 Message: 3327

Hello

how can i do a Firmware up date?

Nice regards Rolf / HB9TSO

3328. Re: ATS3B / High currant indication during tuning with a tuner

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-12 16:47:10 UTC
From: Markus
Topic: 3326 Message: 3328

Hi Rolf,

You are way ahead: Got my ATS-3B kit a week ago. Have placed all R and C, started with semiconductors today...

Your question has been discussed extensively here in this forum. Possible workarounds are:

- during tune-up, insert 10 ohms into the power supply line

- during tune-up, insert a 10dB attenuator between the ATS-3B antenna output and your tuner

- use a tuner which protects your TX from seeing a high SWR, such as this one: http://www.qrpproject.de/ZM4.html

72, Markus HB9BRJ

3329. Re: [AT_Sprint] Firmware update

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-12 20:12:39 UTC
From: Michael Harnage
Topic: 3327 Message: 3329

Rolf,

FB on completing the ATS rig!

If you haven't checked it out yet, give a good read at:

http://w1mt.qrpradio.org/ats3.html

There is a cheaper parallel interface (search the archives here). If you don't have a parallel port, you can use a USB JTAG cable from Olimex.

-mike/w1mt

--- On Sat, 7/12/08, hb9tso <hb9tso@...> wrote:

>
> how can i do a Firmware up date?
>

3330. NAQCC Sprint Wednesday night!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-13 21:08:57 UTC
From: NAQCC
Topic: 2848 Message: 3330

NAQCC Sprint Wednesday night!
This coming Wednesday evening will be the monthly NAQCC Sprint for July, 2008.

I will refer you to the proper URL:

http://www.arm-tek.net/~yoel/sprint200807.html

There you will find all the details as to time, frequencies and also a special prize (a classic book in Morse on CD donated by Chuck Adams K7QO).

This month's Special Award goes to the winner of a drawing among the following: The member in each division who makes the highest score among those who have never before sent in a report for one of our sprints and makes 5 or more QSO's in this sprint.

This is a monthly event that caters to the CW veteran, the CW newcomer, straight key and bug fans. All are welcome to participate (this includes QRO); but you must use QRP power levels to compete for awards.

Come join us and have a real good time!

73 de Dave VA3RJ
NAQCC #0004

3331. KD1JV off-line again

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-15 10:31:28 UTC
From: Bruce Beford
Topic: 3331 Message: 3331

Hi Guys. Got to spend the weekend with Steve, KD1JV at Lobstercon over in Maine. He is headed back out on the trail for a while. According to his website, there are about 20 ATS-3b's available. But- he won't be filling any orders until he returns, in about 3 weeks time.

73,
Bruce N1RX

From the qrp-l mail-list:

Date: Mon, 14 Jul 2008 21:22:59 -0400
From: Steven Weber <kd1jv@...>
Subject: [QRP-L] Going hiking
To: qrp-l@....net
Message-ID: <3.0.6.32.20080714212259.00aa3c08@...>
Content-Type: text/plain; charset="us-ascii"

I'll be off hiking on the AT again, leaving tomorrow AM. Will be doing NJ to VT, about 300 miles hopefully, if the heat don't kill me.

Therefore, if there are any PRF-3 chips in the mail there will be about a 3 week delay before they get taken care of. Everyone I've gotten so far is on its way back.

Sorry, no rig in the pack, its too heavy as it is!

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
http://kd1jv.qrpradio.com

3332. ATS(-1?) alive in Sweden!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-15 12:43:56 UTC
From: Per-Arne Asp
Topic: 3332 Message: 3332

Hi gang!
Just finished an old ATS(-1?) thats been laying around the shack unbuildt for about 5 years. I think it is the first ATS from Steve as the CPU is Atmel 2313.

Rx seems to work OK on 40-30-20. Tested it during weekend on my home antenna (42m EFHW). Added some suggested mods from N5ESE.

Back at my work (selfemployed) I hooked up 10 x 499ohm in parallell to get a dummyload. Measured output voltage (peak-peak) over the dummy at some different supply voltages:

Vsupp = 12 V
@7040 kHz: Vpp ~ 46.5V => 5.5W
@10110 kHz: Vpp ~ 47 V => 5.6W
@14060 kHz: Vpp ~ 45 V => 5.2W

Vsupp = 9 V
@7040 kHz: Vpp ~ 33.3V => 2.8W
@10110 kHz: Vpp ~ 33.4V => 2.8W
@14060 kHz: Vpp ~ 32.5V => 2.7W

Vsupp = 8 V
@7040 KhZ: Vpp ~ 30V => 2.3W
@10110 kHz: Vpp ~ 30V => 2.3W
@14060 kHz: Vpp ~ 28.5V => 2.1W

Does theese figures agree with what you have got? Is there much to gain if I tweak the inductors on the differnt filter boards? What do you say experts?

72/73 de P-A, SE4A/SM4INV

3333. Re: [AT_Sprint] ATS(-1?) alive in Sweden!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-15 13:22:12 UTC
From: WA0ITP
Topic: 3332 Message: 3333

Good Afternoon Per-Arne,

First I'm no expert, just a happy ATS3 owner, but there are indeed some real experts who hang out here.

Those numbers are higher than my ATS3 which is 2.5 - 3.5 Watts with 12 volts. I havent tweaked my LPFs or done any other mods.

I believe your finals are similar, if not the same as, Steve's other 2N7000 final circuits. If so then 5 W or more is pushing the limit a little. Ok for operating into a well matched load, but marginal while tuning. You might consider an absorption bridge SWR indicator or adding a 10 ohm or so current limiting resistor in the Vcc line for tuning purposes like some of the 3B owners do.

Sounds like you've done a fine job on the ATS1, congratulations.

I love this radio stuff !
72, 73 Terry, WA?ITP
www.wa0dx.org/wa0itp
www.4sqrp.com
www.hams4u.com
www.qrpspots.com

----- Original Message -----
From: "Per-Arne Asp" <per-arne@...>
To: <AT_Sprint@yahoogroups.com>
Sent: Tuesday, July 15, 2008 7:43 AM
Subject: [AT_Sprint] ATS(-1?) alive in Sweden!

| Hi gang!
| Just finished an old ATS(-1?) thats been laying around the shack
| unbuildt for about 5 years. I think it is the first ATS from Steve as
| the CPU is Atmel 2313.
|
| Rx seems to work OK on 40-30-20. Tested it during weekend on my home
| antenna (42m EFHW). Added some suggested mods from N5ESE.
|
| Back at my work (selfemployed) I hooked up 10 x 499ohm in parallell to

| get a dummyload. Measured output voltage (peak-peak) over
the dummy at
| some different supply voltages:
|
| Vsupp = 12 V
| @7040 kHz: Vpp ~ 46.5V => 5.5W
| @10110 kHz: Vpp ~ 47 V => 5.6W
| @14060 kHz: Vpp ~ 45 V => 5.2W
|
| Vsupp = 9 V
| @7040 kHz: Vpp ~ 33.3V => 2.8W
| @10110 kHz: Vpp ~ 33.4V => 2.8W
| @14060 kHz: Vpp ~ 32.5V => 2.7W
|
| Vsupp = 8 V
| @7040 KhZ: Vpp ~ 30V => 2.3W
| @10110 kHz: Vpp ~ 30V => 2.3W
| @14060 kHz: Vpp ~ 28.5V => 2.1W
|
| Does theese figures agree with what you have got? Is there
much to gain
| if I tweak the inductors on the differnt filter boards?
What do you say
| experts?
|
| 72/73 de P-A, SE4A/SM4INV
|
|
| ------------------------------------
|
| Yahoo! Groups Links
|
|
|
|
| No virus found in this incoming message.
| Checked by AVG - http://www.avg.com
| Version: 8.0.138 / Virus Database: 270.4.10/1552 - Release
Date: 7/14/2008 6:28 PM
|
|
|

3334. Re: [AT_Sprint] ATS(-1?) alive in Sweden!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-15 13:28:21 UTC
From: John A. Evans - N0HJ
Topic: 3332 Message: 3334

Hi P-A,

No advice on the power output issues though the numbers do seem a little high - could be due to spurs in the output, i.e, you aren't seeing clean power out.

One other bit of advice - be careful handling the modules for the original ATS (I still have one as well). The pins are easily bent if you don't get the modules lined up just right over the sockets. If I used my ATS more, I'd replace the sockets and pins with something more like IC headers and sockets - that would make them a lot sturdier. Also, there is/was a mod or two for the ATS that overcomes some issues. N5ESE had them documented on his page at http://www.io.com/~n5fc/atsprint.htm - he has some performance info there as well.

Enjoy es 72 - john - n0hj

3335. Re: ATS(-1?) alive in Sweden!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-15 13:38:01 UTC
From: Per-Arne Asp
Topic: 3332 Message: 3335

Hi John.

I have done all of the N5ESE mods except adding 1N4148's in the TR
switch(es).

I also see that N5ESE have similar output values to those I have, abt
5.5W @ 12.55 Vsupply.

Thanks for the advise on the filter pins, I noticed that they indeed
looks fragile.

Now, it will be exciting to try the rig IRL! Will do it tonight with
my 42 EFHW at home...

72/73 de P-A, SE4A/SM4INV.

--- In AT_Sprint@yahoogroups.com, "John A. Evans - N0HJ"
<jaevans@...> wrote:
>
> Hi P-A,
>
> No advice on the power output issues though the numbers do seem a
> little high - could be due to spurs in the output, i.e, you aren't
> seeing clean power out.
>
> One other bit of advice - be careful handling the modules for the
> original ATS (I still have one as well). The pins are easily bent
if
> you don't get the modules lined up just right over the sockets. If
I
> used my ATS more, I'd replace the sockets and pins with something
more
> like IC headers and sockets - that would make them a lot sturdier.
> Also, there is/was a mod or two for the ATS that overcomes some
issues.
> N5ESE had them documented on his page at
> http://www.io.com/~n5fc/atsprint.htm - he has some performance info
> there as well.
>
> Enjoy es 72 - john - n0hj
>

3336. Re: [AT_Sprint] ATS(-1?) alive in Sweden!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-15 16:53:35 UTC
From: Stephen Wandling
Topic: 3332 Message: 3336

I am confused by your measurements and/or calculations. I use a formula
that says power equals the Vrms squared, divided by the resistance.
46.5 Vpp = 32.88 Vrms. Measured across 50 ohms would equal about 22
watts. You show show 5.5W.

Or am I wrong in my calculations?

72
Stephen
VE7NSD

Per-Arne Asp wrote:
> Hi gang!
> Just finished an old ATS(-1?) thats been laying around the shack
> unbuildt for about 5 years. I think it is the first ATS from Steve as
> the CPU is Atmel 2313.
>
> Rx seems to work OK on 40-30-20. Tested it during weekend on my home
> antenna (42m EFHW). Added some suggested mods from N5ESE.
>
> Back at my work (selfemployed) I hooked up 10 x 499ohm in parallell to
> get a dummyload. Measured output voltage (peak-peak) over the dummy at
> some different supply voltages:
>
> Vsupp = 12 V
> @7040 kHz: Vpp ~ 46.5V => 5.5W
> @10110 kHz: Vpp ~ 47 V => 5.6W
> @14060 kHz: Vpp ~ 45 V => 5.2W
>
> Vsupp = 9 V
> @7040 kHz: Vpp ~ 33.3V => 2.8W
> @10110 kHz: Vpp ~ 33.4V => 2.8W
> @14060 kHz: Vpp ~ 32.5V => 2.7W
>
> Vsupp = 8 V
> @7040 KhZ: Vpp ~ 30V => 2.3W
> @10110 kHz: Vpp ~ 30V => 2.3W
> @14060 kHz: Vpp ~ 28.5V => 2.1W
>
> Does theese figures agree with what you have got? Is there much to gain
> if I tweak the inductors on the differnt filter boards? What do you say
> experts?
>
> 72/73 de P-A, SE4A/SM4INV
>
>

> ------------------------------------
>
> Yahoo! Groups Links
>
>
>
>
>

3337. Where to start?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-15 17:21:36 UTC
From: spitleaf
Topic: 3337 Message: 3337

Hello!

First off a short precentation. My name is Alexander Edblad and I live in Sweden. I'm not a licensed amateur yet but hopefully soon. At the moment I'm learning CW, which will be the mode I'll be operating. I think I can say that I know the code, but need some trainig before hitting the waves. Today I mostly listen to texts at 25-30WPM, just for learning.

Well, to my question. I read somewhere that it's suggested to start with the semi-conductors. Do you guys have other suggestions? Another thing I wonder is how you protect these components from static electricity. I do have a wrist strap but I find it VERY annoying wearing it while soldering.

Thanks,

Alexander

3338. 2008 Alaska ARRL convention station W1AW / KL7

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-15 19:40:36 UTC
From: Jim Larsen
Topic: 3338 Message: 3338

2008 Alaska ARRL convention station W1AW / KL7

A ham radio Special Events Station will be on the air from Alaska's Arctic Circle at 66° 33' North LAT (Grid Square BP56) at the intersection of the Dalton Highway, 200 miles north of Fairbanks Alaska.

This station will be a good test of some of the ARES equipment owned by the Anchorage Amateur Radio Club. We are sending our Club/ARES Power and tower trailer as well as our SteppIR antenna system up to the Arctic Circle over 550 road miles north of Anchorage. ICOM is a major sponsor of the ARRL Convention event and will provide the radios. This event is being done in cooperation with Fairbanks area ARES and ham clubs and will be a good work together effort.

I am hoping to encourage the operators to spend time down on CW and I understand from a recent email there may be DX spot postings online. "We hope to have live satellite internet to the Arctic Circle. We have hams that will be bringing their wireless networks and antennas to set up a satellite internet sponsorship. It is all an experiment so whether it works will be another issue, but we are hoping to be on the web. ~KL7SP~ ARRL AK 2008 Convention Co-Chair

Details of the event are in an article available at
http://www.AL7FS.us/W1AW-KL7.doc
and at http://www.akhamfest.com/arcticcirclespecial.php

The fun starts on July 25th 2008 at 4:00PM Alaska Arctic Circle Time. (or 00:00UTC on July 26th, 2008) and will close on August 10th 2008 at 4:00PM Arctic Circle Time (or 24:00UTC on Aug 10th).

73, Jim
--
Jim Larsen, AL7FS, http://www.AL7FS.us/
Anchorage, Alaska, (907) 345-3190
Vice President, Anchorage ARC, http://www.kl7aa.net/
Alaska Section Manager, ARRL, http://www.arrl.org/sections/AK.html

3339. Re: ATS(-1?) alive in Sweden!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-16 09:58:05 UTC
From: Per-Arne Asp
Topic: 3332 Message: 3339

Hi Stephen!

Converting Vpp to Vrms (or rather Veffective = the equivalent DC voltage) for sine waves is done like this:

Veffective = Vpp/(2*sqrt(2)) or approx. Vpp/2.8.

The term 2*sqrt(2) instead of only sqrt(2) is due to the fact that there is both a positve and a negative halfwave over the sine period that drives current (indeed of opposite directions but still generating power or heath) trough the dummy.

So power is calcutated as follows:

P = Veffective^2/Rdummy = (Vpp/(2*sqrt(2)))^2/50 [W]

IMHO the power calculations are correct.

72/73 de P-A, SE4A/SM4INV

--- In AT_Sprint@yahoogroups.com, Stephen Wandling <swandling@...> wrote:
>
> I am confused by your measurements and/or calculations. I use a formula
> that says power equals the Vrms squared, divided by the resistance.
> 46.5 Vpp = 32.88 Vrms. Measured across 50 ohms would equal about 22
> watts. You show show 5.5W.
>
> Or am I wrong in my calculations?
>
> 72
> Stephen
> VE7NSD
>
> Per-Arne Asp wrote:
> > Hi gang!
> > Just finished an old ATS(-1?) thats been laying around the shack
> > unbuildt for about 5 years. I think it is the first ATS from Steve as
> > the CPU is Atmel 2313.
> >
> > Rx seems to work OK on 40-30-20. Tested it during weekend on my home
> > antenna (42m EFHW). Added some suggested mods from N5ESE.

> >
> > Back at my work (selfemployed) I hooked up 10 x 499ohm in
parallell to
> > get a dummyload. Measured output voltage (peak-peak) over the
dummy at
> > some different supply voltages:
> >
> > Vsupp = 12 V
> > @7040 kHz: Vpp ~ 46.5V => 5.5W
> > @10110 kHz: Vpp ~ 47 V => 5.6W
> > @14060 kHz: Vpp ~ 45 V => 5.2W
> >
> > Vsupp = 9 V
> > @7040 kHz: Vpp ~ 33.3V => 2.8W
> > @10110 kHz: Vpp ~ 33.4V => 2.8W
> > @14060 kHz: Vpp ~ 32.5V => 2.7W
> >
> > Vsupp = 8 V
> > @7040 KhZ: Vpp ~ 30V => 2.3W
> > @10110 kHz: Vpp ~ 30V => 2.3W
> > @14060 kHz: Vpp ~ 28.5V => 2.1W
> >
> > Does theese figures agree with what you have got? Is there much
to gain
> > if I tweak the inductors on the differnt filter boards? What do
you say
> > experts?
> >
> > 72/73 de P-A, SE4A/SM4INV
> >
> >
> > ------------------------------------
> >
> > Yahoo! Groups Links
> >
> >
> >
> >
> >
>

3340. Re: [AT_Sprint] Re: ATS(-1?) alive in Sweden!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-16 21:02:57 UTC
From: Stephen Wandling
Topic: 3332 Message: 3340

Hi Per-Arne,

In my humbled opinion, I was wrong and your conversions and calculations
are correct.

72
Stephen
VE7NSD

Per-Arne Asp wrote:
> Hi Stephen!
>
> Converting Vpp to Vrms (or rather Veffective = the equivalent DC
> voltage) for sine waves is done like this:
>
> Veffective = Vpp/(2*sqrt(2)) or approx. Vpp/2.8.
>
> The term 2*sqrt(2) instead of only sqrt(2) is due to the fact that
> there is both a positve and a negative halfwave over the sine period
> that drives current (indeed of opposite directions but still
> generating power or heath) trough the dummy.
>
> So power is calcutated as follows:
>
> P = Veffective^2/Rdummy = (Vpp/(2*sqrt(2)))^2/50 [W]
>
> IMHO the power calculations are correct.
>
> 72/73 de P-A, SE4A/SM4INV
>
>
> --- In AT_Sprint@yahoogroups.com, Stephen Wandling <swandling@...>
> wrote:
>
>> I am confused by your measurements and/or calculations. I use a
>>
> formula
>
>> that says power equals the Vrms squared, divided by the
>>
> resistance.
>
>> 46.5 Vpp = 32.88 Vrms. Measured across 50 ohms would equal about
>>
> 22
>

>> watts. You show show 5.5W.
>>
>> Or am I wrong in my calculations?
>>
>> 72
>> Stephen
>> VE7NSD
>>
>> Per-Arne Asp wrote:
>>
>>> Hi gang!
>>> Just finished an old ATS(-1?) thats been laying around the shack
>>> unbuildt for about 5 years. I think it is the first ATS from
>>>
> Steve as
>
>>> the CPU is Atmel 2313.
>>>
>>> Rx seems to work OK on 40-30-20. Tested it during weekend on my
>>>
> home
>
>>> antenna (42m EFHW). Added some suggested mods from N5ESE.
>>>
>>> Back at my work (selfemployed) I hooked up 10 x 499ohm in
>>>
> parallell to
>
>>> get a dummyload. Measured output voltage (peak-peak) over the
>>>
> dummy at
>
>>> some different supply voltages:
>>>
>>> Vsupp = 12 V
>>> @7040 kHz: Vpp ~ 46.5V => 5.5W
>>> @10110 kHz: Vpp ~ 47 V => 5.6W
>>> @14060 kHz: Vpp ~ 45 V => 5.2W
>>>
>>> Vsupp = 9 V
>>> @7040 kHz: Vpp ~ 33.3V => 2.8W
>>> @10110 kHz: Vpp ~ 33.4V => 2.8W
>>> @14060 kHz: Vpp ~ 32.5V => 2.7W
>>>
>>> Vsupp = 8 V
>>> @7040 KhZ: Vpp ~ 30V => 2.3W
>>> @10110 kHz: Vpp ~ 30V => 2.3W
>>> @14060 kHz: Vpp ~ 28.5V => 2.1W
>>>
>>> Does theese figures agree with what you have got? Is there much

>>>
> to gain
>
>>> if I tweak the inductors on the differnt filter boards? What do
>>>
> you say
>
>>> experts?
>>>
>>> 72/73 de P-A, SE4A/SM4INV
>>>
>>>
>>> ------------------------------------
>>>
>>> Yahoo! Groups Links
>>>
>>>
>>>
>>>
>>>
>>>
>
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>
>
>

3341. FD 2008 Finally

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-17 01:44:33 UTC
From: jpkeon@nc.rr.com
Topic: 3341 Message: 3341
Attachments: 1 described; binary payloads are missing from this source WARC

Gang:

Sorry for the delay. My computer is down and I am still trying to find a way to get on and send the story.

I am hoping you get to read it this time.

JohnPaul/AB4PP

3342. FD 2008 Finally

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-17 01:49:41 UTC
From: jpkeon@nc.rr.com
Topic: 3341 Message: 3342

Gang:

I am still trying to post the story of our FD 2008 for the Knightlites.

This is my third attempt.

Here we go again.

* * * * *

Well, this had to be one of the nicest FD events we had on a long trip. It was nice for quite a while and then it had it's low points. I think it should be aptly named a "Lil Ole Mullet Blow to Balsam."

We arrived in due fashion a day early at the site of Black Balsam Ridge and Sam's Knob. Sir Paul/AA4XX and Sir Chris/KD4PBS arrived from their trip up by way of some stops and scenic distractions as described by Paul in his email to the group.

Sir Joe/WA4GIR and I (JP/AB4PP) rode up on the same route and then took the scenic Blue Ridge parkway to the forestry road (816) that leads up to the parking area where we disembarked. This year I can say that when we arrived we did it in a fashion that was perfect. We took our time and got there just in time for a gully washer. The view up there in the evening is awesome. You can see a long way from just the low area where we parked. We waited it out and then after the storm passed we made our way out to the meadow and set up camp. Since Joe thought he had never been there before he was ready for a long hike and found that we only had to walk a short .6 miles to the site on somewhat flat land. I took my GPS that my kids gave me for Christmas and learned how to finally use it for marking the waypoints and reading them out from the destination. The good part was that I also found out during the weekend that the GPS actually does show a true representation of the altitude. I will explain that later. Also, Joe remembered later on that he had in fact been up there hiking years ago. So he was not new to the area either. And there is little change, I am sure, over all those years.

After we set up in the meadow on the Knob the weather changed drastically on Friday night. It went from cool and nasty to cold, windy, wet and wild. We had thunder and lightning mostly all night and it made it a no go for operating on the radio. We had put up two of our antennas and that was so that we could test out the gear on Friday night. We hit the tents and went to bed early. Sleep was not in the picture though, as the weather got worse during the night and progressively got more windy. The constant flapping of the tent flaps was enough to drive anyone crazy. Now, remember that Joe and I had set up down lower than Paul and Chris too. They were set up on top of the Ridge, and it is several hundred feet higher than where we were set up. Those of you who saw the pictures that Paul sent can see that our tents were down on the summit. We were set up on the summit near Sam's Knob. We were right on the Art Loeb trail. Well, not exactly on it, but about 50 yards off the trail in the high grass. Oh, that is another thing. The grass was not quite as high as I remembered it from the past couple of years and that was probably due to the fact that the wind blew most of it down on it's side when we arrived. It did actually stand up during the

day on Saturday and Sunday.

Saturday, sometime about 6:05 am the weather broke and we got daylight coming in as was called for on the computer (my Garmin Legend GPS). As the sun rose the weather changed and it got progressively nicer. By 8 am we had pleasant weather again. We made a jaunt to the parking lot to cook some breakfast. It was easier to go to the parking lot and do it than sit out there on the summit and do it. An added thing to going to the parking lot was that there was a constant flow of tourists from all over the world coming through the parking lot while we were cooking. It is a real hoot to see the floor show as the tourists come up in groups to go on hiking trails. They were carrying and wearing the brand new boots, hiking sticks, the lensatic compasses and all the other new fiberglass hiking sticks. We talked to some and they wanted to know about our fishing poles in the meadow. We explained about the emergency preparedness drill called Field Day. Some were very interested in the use of the radios with only battery power. A few came by the site and saw the gear and others told us they just viewed it from the trail.

Our meals and planning was much better this time for me. I did not take quite as much as I usually do and as an end result I was happy with myself for this accomplishment. I even planned out a more nutritious diet for myself this time. I carried a lot of dried fruits, berries and the like and they went very well with the oatmeal with cinnamon and apples. As for the other meals I had tuna and other items in dehydrated bags. Now, the real accomplishment was watching Joe prepare his meals. He had not done this hiking and camping in a long time. He is in a lot better physical shape than I am and he enjoyed the short jaunt to the site. He runs every day and was not the least winded from our hikes in and out. He had gone to REI and gotten some really good dehydrated meals. I went to the DICKS near the house. They have discontinued their line of dehydrated foods. I went the night before leaving to take off up to the mountain and it was too late to drive to the other side of town to get some of those. I will have to do better planning there for next year. When I got home I found out that they have an Outdoor Provision Company about 5 minutes from the house in another part of Raleigh. Unfortunately I did not know that night. Luckily my son had just come home from Afghanistan and he gave me some of the extra MRE’s he had in his RUCK and I had several meals there. I just took those with me. They are 2500 calorie meals and are very good. Water was plentiful for us. We had more than enough and that was good. I took a 3 gallon jug and we washed dishes and kept clean with that in the vehicle. Thank God for baby wipes too. I took some of those and they are nice when you get sweaty and feel nasty. I had been sending those to the guys overseas for the last year and a half and now I know why they like them so much. And those nutrition bars are a life saver too. Dried fruits are awesome to have in the evening for snacks and just to give you a boost. When we hiked up to the top of the Ridge on Saturday it was nice to reach in my pocket and get some trail mix and some dried fruit to give my body some nourishment. I have learned over the years to carry some of those in zip locks to save draining my body completely of nourishment, especially when I am moving around from one place to another and leave the gear in the other place.

Saturday morning was also a time to go find a place to access the use of the cell phones to call home and check in with them. We had to drive down the mountain 5 miles to a lookout to find a decent signal. One thing we learned while doing this was that Joe, who was driving, should not look at the phone and watch for a decent signal while riding the brakes on the van. When we finally stopped at the overlook we were headed to, we had smoke pummeling out of the wheel wells and it was a site to see. We did not do any damage and just took a rest while the brakes cooled off. We did finally get through on the phones too. It would seem that at 6,214 feet with an unrestricted view you could hit a cell tower; but, that was not

the case. You still had to drive to get within a footprint of a cell tower for service. Another lesson learned about communications. Don't always expect the obvious to be true. It was not for us. Even Paul and Chris said they could not get a signal from the top of the Ridge at the high height of 6,214 feet. I tried with my phone and could not either. Strange as it may, we could see Tennessee, Georgia, South Carolina and all around us was North Carolina. However, we could not get the cell phones to work.

After making our calls Joe and I hiked up to the top of Black Balsam Ridge from the lower road. The elevation at the bottom is 5,700 feet. We hiked the Art Loeb trail up the mountain and crossed the new Mountain to the Sea Trail that is being built. It starts up there in the Western part of NC and goes all the way to Cape Hatteras and goes right through Durham and Raleigh. It showed that if we really needed to we could take a long walk home. We hiked up to 6,214 and it took only 25 minutes. Actually, it was a .66 mile trek up the mountain and it was a change in elevation of only the 514 feet. At the top we met and greeted Sirs Paul and Chris. They had their equipment set up again for 6, 2 and 440. They also had stuff taken down during the night from the storms. It blew a lot harder up there on the top than it did down where we were I am sure. From the top of the ridge you can see Georgia, SC and Tennessee. The view was unrestricted when we were up there and the smog or layer of mist was minimal. You could even see the cloud formations in the valleys from up there. We stayed a while, took some group photos and then we headed back down the mountain together and had a brunch break and chatted about our mutual experiences and our plans for the rest of the FD effort. While we were up there we could see the weather coming our way from the distance. It was very nice while we were climbing up, for the visit, and the climb down the mountain. When we got to the parking lot to head out to the summit though that all changed later. The weather came in with a fury again.

Well, little did we know we were in for more storms and higher wind gusts than the night before. In the early part of the evening we were just trying to get on the air and there was a lot of static in the air. The radio was picking up some signals and we were trying to make some contacts. Without notice I found that the static was higher than I would have expected. I went to touch my paddles and got zapped from a discharge and then looked out the windows of the tent and saw a large storm coming up the valley at us. I yelled to Joe in his tent and he said "wait" several times. He was trying to make another contact. Then I went over and told him as the rain started to come down with a fury. It was big drops, and the wind picked up to a howling fury. He had disconnected as he said he heard this "tick…tick…tick" in his head phones and when he touch his key he also got a little discharge. We decided to unplug everything and wait it out……..

Several hours later we were still sitting there trying to make a few contacts at a time and I sat with Joe in his tent. My Sierra would not tune up for some reason and for fear I had fried it in the storm I did not use it again. Water was getting deeper around the tent, both my vertical (Black widow vertical for 40-10) and the 80-10 meter doublet up on the DK9SQ mast were down on the ground. I had guyed both poles low and the taller one higher up on the mast. In the winds they both came down. So I was literally off the air at my site. I later found out when I got home that the wires where I had soldered the connectors on the antenna had split and come loose. With all the rain and the bad weather I could not get it into my tent and use the little gas fired soldering unit I had for just such an emergency. I learned a vauluable lesson from that one. I keep a diary from every trip I make and that one definitely went into the log. A valuable lesson. There is just so much you can do with the gear when you set up in the open like we did.

We waited for a lull in the weather and made a trip to the vehicle and had some dinner and relaxed for a while. During that time we had a couple more storms roll through and it was beautiful to see them coming; but, when it got to us it was not nice. The lightning display and the thunder were something else. We also had the howling winds again. While in the parking lot we did get to meet some very unusual people. One of them visited both the campsites and he was a wealth of knowledge on the trails and the time people stayed there. As I found out later he lives up there and around the trails the whole season while the parkway is open. Then he moves back down to either his home in SC or he has another place he goes to near Brevard. Evidently Chris and this fellow grew up in the same area and went to the same schools too. They were of no relation and I could easily understand that from knowing Chris as long as I have. There is very little the two have in common.

We went back to the site and made a few more contacts until the lightning started back up and the howling winds started back. We quit for the night and tried to go to sleep. It was a futile effort at the least. It was hard to sleep with all the noise. I made several attempts during the night to get on the radio with no good results. If I had only known that there was a loose wire out there on the antenna I would have overcome that. But with the weather the way it was early on it was hard to get outside the tent and do any repairs. Later on during the night I made one venture outside the tent and it was foggy and it seemed like we were in a cloud again like we had been on an earlier visit to the same site. That was a story we will never forget. This time I had a LED light on my tent, blinking every two to three seconds and left it on while I was away from the tent. It sure did make it easy to find my way back to the tent too.

Sunday morning when I woke up it was a lot quieter. Not real quiet, there were still the remnants of the storms around. We decided to pack up and start our hike out. Paul and Chris had done the same thing. Their camp was dismantled and they came down the mountain as we came out. We all left out at about the same time and headed home. Another FD with the Knightlites was in the books. The contacts we made while we were there were not many; but, they were choice and will never be forgotten. For those of you we did make contact with, thanks for being so patient and good listeners for us.

We did not see any bears, nor did we hear about any. One fellow said that they did see one years ago but not lately. Even one of the park rangers I spoke with at an overlook said they did not see them very often up there. They seem to shy away from the people on the parkway.

We did hear about a snake, from more than one individual, and I am sure they are up there. We did not see signs of them, nor did we see any.

On the way home we did get a little off the beaten path too. Joe and I were talking, reminiscing about the wonderful time we had, and did not notice we took a wrong turn until we saw the “Welcome to SC” sign in Spartanburg. We turned around and made it back to where we started from on the interstate and then went home. Needless to say we added a lot of time to our journey home; but, we were enjoying the trip so much and knowing that we were headed home we did not fuss about it. We were dry, fed and safe. I can definitely say now that with all the trips I have been on for the past 14 years or so with the Knightlites, that I have only seen two of them with fair weather. The rest have all been stories that related everything from near hurricane weather on the Core Banks, tornadoes on Falls Lake during one of the ARCI contests to the awesome storms in the mountains on the trips we have made to Max Patch and Black Balsam.

All in all, though, we had a wonderful time. We learned a lot and will just have some things to plan for on the next outing.

3343. 2008 Flight of the Bumblebees - July 27

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-17 13:26:25 UTC
From: scott mcmullen
Topic: 3343 Message: 3343

The 2008 running of the Adventure Radio Society's 'Flight of the Bumblebees' is approaching on July 27. So far, 143 intrepid QRP operators have signed up to hike, bicycle, or paddle to an operating position and participate in the event as Bumblebee stations.

Participation from home stations is also welcome and encouraged.

Group operation is welcome in the Flight of the Bumblebees. You may operate under a single call and report a single score, or under multiple calls and report multiple scores. In any event, you are limited to operating a single transmitter at a time.

Maximum power is five watts. We operate CW on 40, 20, 15 and 10 meters, on the standard QRP frequencies. Each contact will receive one point. The same station can be worked on different bands for additional QSO points and multipliers.

The rules in full, and details about soliciting a bee number, are available at:

http://arsqrp.pbwiki.com/Flight+of+the+Bumblebees

Hope to hear you on the air during the 2008 ARS QRP FoBB

73
Scott
W5ESE - bumblebee 052

3344. Firmware Version Command

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-18 17:08:10 UTC
From: kr5l
Topic: 3344 Message: 3344

Hi,

I finally got around to building my 3B. I have had many, many QSOs with it and it is a pleasure to use. I have a couple of anomalies:

1. The firmware version command doesn't work with my unit. When I hold the menu button and then plug in the power connector.... the unit just comes up displaying and announcing the band module.... as if the Menu key wasn't pressed during power up. I have tried this several time with no success. (Not a big deal -- but it doesn't work) \

2. Placing my 3B in 'Stealth' mode (using the push buttons for paddles or straight key) works as advertised until I try to go back to external paddle/straight key operation. The Tune Dwn button generates dots and the Up button generates dahs.... not imabic.... squeezing both paddles results in a string of dahs... not alternating. Weird. Also, any announciation such as Freq, Menu fucntions (S,M,etc) are sent over the air!!! I had to try every trick in the book to retrieve my 3B from the "Twilight Zone". Again, when in Stealth Mode, the rig behaves okay, it just acts strange when I try to exit the Stealth Mode and go back to normal operation.

Does anybody have any suggestions or ideas as to what is going on here?? Neither problem effects my day to day operation as I would rarely use the Stealth Mode and of course the Version Feature would be useful if there was a firmware upgrade. I would be nice to have all features working properly.

Thanks in advance for your help. 72's

Jerry Henshaw KR5L

3345. Re: [AT_Sprint] Firmware Version Command

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-18 19:04:21 UTC
From: Michael Harnage
Topic: 3344 Message: 3345

Jerry,

Congrats on finishing your 3b!

I haven't seen the version not annunciated so this is a first. Can you try this: Pull the power plug. Hold the menu and split buttons down for about 5 seconds (this discharges the caps so the boot process won't think it's an overcurrent condition, which would bypass the version annunciation). Then, just holding the menu button down apply power.

For the alternative paddle mode, we'll need a little more details as to how you got in and how you tried to get out. I have not tested or looked at what Steve did in his version for this, but since he's out for a few weeks I'll try to help, but need much more detailed information.

-mike/w1mt

--- On Fri, 7/18/08, kr5l <jerryhenshaw@...> wrote:

> 1. The firmware version command doesn't work with
> my unit.
>
> 2. Placing my 3B in 'Stealth' mode (using the
> push buttons for
> paddles or straight key) works as advertised until I try to
> go back to
> external paddle/straight key operation.

3346. W1MT firmware Memory Functions

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-19 01:02:31 UTC
From: kc7fys
Topic: 3346 Message: 3346

Hello Mike and others listening in,
I am having a little trouble utilizing the memory functions in your version of the firware. Pressing V+M in rapid succession gives me a B. Pressing them together, of course, gives me the F function.

Could you for posterity outline how to:

Record each of the three memories
Save them
Check what is in them
Erase one of them and re-record
Play them back

...for the dufuses in the group, me being Chief among them.
Thanks, and I am really enjoying your firmware's SCAN function.

I have a suggestion, and let me know if this is reasonable. I can't tell when it is scanning UP the band, or scanning DOWN the band. Would it be reasonable to have a different letter annunciated at each end of the scan range... I can't think of a suitable one that wouldn't possibly be mistaken for other indications. ST and SB? (seems too long to be practical...)
Just a suggestion.
Best 73,
Jonathan Haynes 7J1AWL/KC7FYS

3347. Re: Firmware Version Command

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-19 02:26:05 UTC
From: kr5l
Topic: 3344 Message: 3347

-
Mike,

Thanks for the quick response, I tried your suggestion of holding MENU and SPLIT to discharge the caps and then I tried holding Menu and power up .... still no cigar ... go figure.

The Stealth Mode is another story. I was finally able to get the 3B back into normal mode by enabling and exiting the mode several times before I was back to normal operation. I haven't tried going into Stealth Mode again as I wasn't sure I could ever get the CPU back from never-never land again. There is something flaky going on within my CPU with the version and stealth mode issues. I might just have a corrupted software download. As I said, everything else works just fine. Thanks again for your help and I appreciated any additional thoughts that you may have concerning these issues.

All The Best,

Jerry, KR5L

-- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:
>
> Jerry,
>
> Congrats on finishing your 3b!
>
> I haven't seen the version not annunciated so this is a first. Can you try this: Pull the power plug. Hold the menu and split buttons down for about 5 seconds (this discharges the caps so the boot process won't think it's an overcurrent condition, which would bypass the version annunciation). Then, just holding the menu button down apply power.
>
> For the alternative paddle mode, we'll need a little more details as to how you got in and how you tried to get out. I have not tested or looked at what Steve did in his version for this, but since he's out for a few weeks I'll try to help, but need much more detailed information.
>
> -mike/w1mt
>
> --- On Fri, 7/18/08, kr5l <jerryhenshaw@...> wrote:
>
> > 1. The firmware version command doesn't work with
> > my unit.

> >
> > 2. Placing my 3B in 'Stealth' mode (using the
> > push buttons for
> > paddles or straight key) works as advertised until I try to
> > go back to
> > external paddle/straight key operation.
>

3348. Re: [AT_Sprint] W1MT firmware Memory Functions

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-19 14:09:16 UTC
From: Michael Harnage
Topic: 3346 Message: 3348

Playing memory:
Probably too quick on clicking the V then the M to get memory 1 to play. Try playing with the timing... I just check it on mine and if I have the clicks too close together then it just does the vfo switch (B or A). It's all in the timing. :)

Storing memory:
When you enter M mode you have to store all three memories during the same session. You can not edit just one. (This area needs work :)) Start entering the first memory then when done with the first memory hold the dah paddle down for seven dahs. Then enter the second memory and enter the 7 dahs again. Now enter the last memory. If you goof one of the memories you can click the tune down key to backup for the last 7dah (or beginning) marker. This will allow you to try the last memory again. I find this helpful cause I generally don't get all three right and it gives me a way to fix the problem rather than have to enter them all again. When done click the menu button and you will hear what you entered. Should sound something like "memory1" 7dahs "memory2" 7 dahs "memory3". Note, you don't have to enter all 3 memories. 1 or 2 is fine. Ha, you can even enter more than 3 memories but currently only the first three are playable.

Scanning:
It never scans down. Only and always up. You will hear an "S" when it loops from the highest scan freq back to the lowest scan freq.

Hope this helps,
Mike

--- On Sat, 7/19/08, kc7fys <kc7fys@...> wrote:

> I am having a little trouble utilizing the memory functions
> in your
> version of the firware. Pressing V+M in rapid succession
> gives me a B.
> Pressing them together, of course, gives me the F function.
>
> Could you for posterity outline how to:
>
> Record each of the three memories
> Save them
> Check what is in them
> Erase one of them and re-record
> Play them back
>
> ...for the dufuses in the group, me being Chief among them.
> Thanks, and I am really enjoying your firmware's SCAN
> function.
>
> I have a suggestion, and let me know if this is reasonable.

> I can't
> tell when it is scanning UP the band, or scanning DOWN the
> band. Would
> it be reasonable to have a different letter annunciated at
> each end of
> the scan range... I can't think of a suitable one that
> wouldn't
> possibly be mistaken for other indications. ST and SB?
> (seems too long
> to be practical...)

3349. ATS-3b finished - not working :-(

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-19 15:24:14 UTC
From: Heinz
Topic: 3349 Message: 3349

Dear all,

I have finished completion of my ATS-3b, but it is not working. It is one of the recent kits from KD1JV shipped in late June 2008.

I am at the stage where all components except L3 are fitted to the board (page 23 of the manual). When I connect a 9V battery I see "8" on the LED display (for a second or so) and also hear "8" in the phones. Then I hear a continous sine tone in the headphones. The frequency is not influenced when adjusting CT1 (BFO trimmer cap).

I can trace the signal with a scope and find it on pin 7 of U3 (Audio Amp) with 0.7Vpp It is not on pins 5 or 6 (?!?). I can further find it on pin 1 of U3 (0.6Vpp; slightly distorted) and on the 5V line with about 0.1Vpp.

Voltages according to table on page 24 are OK with the following exceptions: pin 1 of U4 (Analog SPDT switch) is 2.48V (expected 2.2V) and pin 4 is 0V (expected 2.2V).

I have resolded all pins of U4 with no effect.

I can key my paddle and hear the proper side tone in the phones (The controller definetly works!). In between caracters I still can hear the annoying sine tone.

Did I fry U4? Any ideas what I can check out next?

73 Heinz, OE5EEP

3350. Re: ATS-3b finished - not working :-(

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-19 16:50:20 UTC
From: Markus
Topic: 3349 Message: 3350

Hi Heinz,

Got my ATS-3B kit 10 days ago. I did the same tests today, and
everything worked fine. Will proceed tomorrow with the ref osc
calibration.

Since U3 is powered by 5V and you measure a 100mV oscillation on 5V,
it's not surprising this appears on the output of U3. I would check
why the 5V supply is oscillating: U9, C25, polarity of C59.
What's your supply current during this test @ 9V DC IN ? Mine is
around 40mA after seeing/hearing the "8".

73, Markus HB9BRJ / AE6MG

3351. Re: ATS-3b finished - not working :-(

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-19 17:39:53 UTC
From: Heinz
Topic: 3349 Message: 3351

Hi Markus,

Congrats on your ATS-3b and thanks for your reply.

My supply current is 80mA @ 9V DC. I have checked the voltage regulator U9 and surounding C's, nothing found.

I have added another 220µF in parallel to C59. This lowers the frequency of the tone slightly and knocks down the signal to 5mVpp at the head phones (but still heared at an offensive level).

If it would not be SMD I could easily lift the 5V supply from U6 and power from a seperate supply to circle in on the source of the signal. I will try this next...

73 Heinz, OE5EEP

3352. Re: ATS-3b finished - not working - CORRECTION

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-19 17:43:28 UTC
From: Heinz
Topic: 3349 Message: 3352

--- In AT_Sprint@yahoogroups.com, "Heinz" <h_schnait@...> wrote:

> I have added another 220µF in parallel to C59. This lowers the
> frequency of the tone slightly and knocks down the signal to 5mVpp at
> the head phones (but still heared at an offensive level).

This should be ...down to 50mVpp...

Heinz

3353. Re: Firmware Version Command

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-19 18:20:09 UTC
From: k6jf_radio
Topic: 3344 Message: 3353

> 1. The firmware version command doesn't work with
> my unit.

Jerry, you need to have a straight key in the paddles socket to get the firmware version, or just insert a mono plug. This is a known problem with the firmware. If you plan to run 80m you might want to upgrade the original firmware if necessary to V3 which is in the files section. This fixes an 80m Direct Frequency Entry problem. It also has a fix for the XIT function.

Jim K6JF

--- In AT_Sprint@yahoogroups.com, "kr5l" <jerryhenshaw@...> wrote:
>
> Hi,
>
> I finally got around to building my 3B. I have had many, many QSOs
> with it and it is a pleasure to use. I have a couple of
anomalies:
>
> 1. The firmware version command doesn't work with my unit.
When I
> hold the menu button and then plug in the power connector.... the
unit
> just comes up displaying and announcing the band module.... as if
the
> Menu key wasn't pressed during power up. I have tried this several
> time with no success. (Not a big deal -- but it doesn't work) \
>
> 2. Placing my 3B in 'Stealth' mode (using the push buttons for
> paddles or straight key) works as advertised until I try to go back
to
> external paddle/straight key operation. The Tune Dwn button
> generates dots and the Up button generates dahs.... not imabic....
> squeezing both paddles results in a string of dahs... not
alternating.
> Weird. Also, any announciation such as Freq, Menu fucntions
> (S,M,etc) are sent over the air!!! I had to try every trick in the
> book to retrieve my 3B from the "Twilight Zone". Again, when in
> Stealth Mode, the rig behaves okay, it just acts strange when I try
to
> exit the Stealth Mode and go back to normal operation.
>
> Does anybody have any suggestions or ideas as to what is going on
> here?? Neither problem effects my day to day operation as I would
> rarely use the Stealth Mode and of course the Version Feature would

be
> useful if there was a firmware upgrade. I would be nice to have all
> features working properly.
>
> Thanks in advance for your help. 72's
>
> Jerry Henshaw KR5L
>

3354. Re: Firmware Version Command

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-19 18:27:03 UTC
From: Jim Fraser
Topic: 3344 Message: 3354

You can hold your DOT paddle closed while holding the Menu button
down on power up. This also works!

Jim K6JF

--- In AT_Sprint@yahoogroups.com, "kr5l" <jerryhenshaw@...> wrote:
>
> Hi,
>
> I finally got around to building my 3B. I have had many, many QSOs
> with it and it is a pleasure to use. I have a couple of
anomalies:
>
> 1. The firmware version command doesn't work with my unit.
When I
> hold the menu button and then plug in the power connector.... the
unit
> just comes up displaying and announcing the band module.... as if
the
> Menu key wasn't pressed during power up. I have tried this several
> time with no success. (Not a big deal -- but it doesn't work) \
>
> 2. Placing my 3B in 'Stealth' mode (using the push buttons for
> paddles or straight key) works as advertised until I try to go back
to
> external paddle/straight key operation. The Tune Dwn button
> generates dots and the Up button generates dahs.... not imabic....
> squeezing both paddles results in a string of dahs... not
alternating.
> Weird. Also, any announciation such as Freq, Menu fucntions
> (S,M,etc) are sent over the air!!! I had to try every trick in the
> book to retrieve my 3B from the "Twilight Zone". Again, when in
> Stealth Mode, the rig behaves okay, it just acts strange when I try
to
> exit the Stealth Mode and go back to normal operation.
>
> Does anybody have any suggestions or ideas as to what is going on
> here?? Neither problem effects my day to day operation as I would
> rarely use the Stealth Mode and of course the Version Feature would
be
> useful if there was a firmware upgrade. I would be nice to have all
> features working properly.
>
> Thanks in advance for your help. 72's
>

> Jerry Henshaw KR5L
>

3355. Re: W1MT firmware Memory Functions

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-19 20:06:45 UTC
From: Dave
Topic: 3346 Message: 3355

--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:
>
> Playing memory:
> Probably too quick on clicking the V then the M to get memory 1 to
> play.

Something that took me a while to figure out with Mike's version:
You can't roll from the V to the M (or U or D). You must release
the V very briefly before pressing the M. At one point I had modified
Mike's code to allow button roll-over, but it was incompatible with
some other new functions, so I just learned not to roll from the V
to the M by using only one finger rather than two.

Dave, WA3OFF

3356. Re:Re: [AT_Sprint] W1MT firmwar e Memory Functions

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-20 01:12:53 UTC
From: J. Haynes
Topic: 3356 Message: 3356

Dave and Mike, Thanks guys. Like myself on occasion, the memory was empty! Thanks for the note on the scan function. Now I'm clear, and it works great.
Worked V63WWE, so I'm doing something right!
Thanks, gents.
Jonathan KC7FYS/7J1AWL

3357. Re: [AT_Sprint] Re: Firmware Version Command

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-20 01:58:44 UTC
From: Michael Harnage
Topic: 3344 Message: 3357

That's right. Thanks for kicking my memory Jim.

You need to hold the Dah paddle down and the menu button at the same time if you want to hear the version on Steve's firmware. (His original version 1 and newer version 3 both do this.) This effectively puts the rig in straight key mode after bootup is done. (Course with a two conductor straight key plug the dah paddle is held for you).

-mike

--- On Sat, 7/19/08, Jim Fraser <jimf53@...> wrote:

> You can hold your DOT paddle closed while holding the Menu
> button
> down on power up. This also works!
>
> Jim K6JF

3358. Sunday Night - Run For the Bacon

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-20 03:31:01 UTC
From: Larry Makoski W2LJ
Topic: 3358 Message: 3358

This Sunday night s the July Run For the Bacon, which is a friendly two hour QRP Sprint sponsored by the Flying Pigs QRP Amateur Radio Club International.

It's looking like Sunday is going to be a hot one across a lot of the country. Maybe the hot weather will induce the ionosphere to be hot and give us great conditions for the Sprint! Well, we can hope, anyway!

For the details and the Autolog, please visit :

http://www.gentzow.com/fpqrp/fpqrprun.php

See you there! And by the way, think of this as a "warm up" for the Flight of the Bumblebees to be held next Sunday!

Oink, oink es 73 de Larry W2LJ
FP♯ 612

3359. typo in ATS-3B manual?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-20 07:51:23 UTC
From: Markus
Topic: 3359 Message: 3359

Hi all,

On page 23, the manual (V3) says:

"Connect a voltmeter between ground and the Drain of Q4, the PA keying transistor (Large metal tab is Drain). Send a string of Dahs and watch the voltmeter. The voltage reading should go to near the DC supply input voltage. It should then slowly decay to zero when you stop sending."

Q4 does not have a large metal tab, and according to the schematics it's Q6 which keys the DC power line going to the PA.

Therefore I assume that Q4 in the text quoted above should read Q6.

I was afraid my ATS-3B did not work, but on the drain of Q6 I observed the expected behaviour when operating the paddle.

73, Markus HB9BRJ

3360. Re: typo in ATS-3B manual?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-20 15:32:02 UTC
From: Dave
Topic: 3359 Message: 3360

--- In AT_Sprint@yahoogroups.com, "Markus" <hb9brj@...> wrote:
> Q4 does not have a large metal tab, and according to the schematics
> it's Q6 which keys the DC power line going to the PA.

Correct. The 3B-incorrect text carried over from the ATS-3A manual;
Q4 in the 3A is Q6 in the 3B.

Dave, WA3OFF

3361. another ATS-3B came alive

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-20 17:19:01 UTC
From: Markus
Topic: 3361 Message: 3361

Hi all,

Since the weatherman announced a rainy Sunday (which turned out to be totally wrong), I took the time to check and align my ATS-3B.

Most alignments went really smooth. The reference oscillator was very close to its nominal frequency (guess less than 20Hz). Also the LO frequency trim required only a single click.

On 15m (the only bad filter I have built so far) I measured 2W at 9V and 3.5W at 12V. So far I was not successful to bring the power up to the values mentioned in the manual. Seems to be really tricky on 15m.

RX MDS is below 0.2uV, but the TX harmonics are not yet where they should be. Think this goes together with output power and needs more tweaking.

Will build the 80m band filter next. Hopefully that one will be easier to align.

73, Markus HB9BRJ

3362. Re: [AT_Sprint] typo in ATS-3B manual?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-20 18:14:18 UTC
From: Hank Greeb
Topic: 3359 Message: 3362

There are several misteaks of speling as well. Thanx 4 bringing this to
the attention of the group.

Markus wrote:
> Hi all,
>
> On page 23, the manual (V3) says:
>
> "Connect a voltmeter between ground and the Drain of Q4, the PA keying
> transistor (Large metal tab is Drain). Send a string of Dahs and watch
> the voltmeter. The voltage reading should go to near the DC supply
> input voltage. It should then slowly decay to zero when you stop sending."
>
> Q4 does not have a large metal tab, and according to the schematics
> it's Q6 which keys the DC power line going to the PA.
>
> Therefore I assume that Q4 in the text quoted above should read Q6.
>
> I was afraid my ATS-3B did not work, but on the drain of Q6 I observed
> the expected behaviour when operating the paddle.
>
> 73, Markus HB9BRJ

3363. Re: typo in ATS-3B manual?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-20 19:53:01 UTC
From: Heinz
Topic: 3359 Message: 3363

I found another typo on page 28. In the Receiver section schematic there is a connection from U4 to "MUTE U6 PIN20". This should be "U6 PIN28"

73 Heinz, OE5EEP

--- In AT_Sprint@yahoogroups.com, Hank Greeb <n8xx@...> wrote:
>
> There are several misteaks of speling as well. Thanx 4 bringing this to
> the attention of the group.
>

3364. Re: [AT_Sprint] ATS-3b finished - not working :-(

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-20 20:02:32 UTC
From: Michael Harnage
Topic: 3349 Message: 3364

Heinz,

It does sound like U4 is or something around it might be the culprit. Here are a few things to look at:

The mute pin (pin 29 of the MPU) controls the digital switch (U6). Make sure that the signal from the MPU is making it to the switch.

The ripple on the 5V line should not be there (assuming the source is not the power supply). So check every device that is fed by 5V and make sure there are no solder bridges around the 5V input to those devices. Finding this one should take care of the high current draw as well.U3 may be a good first place to double check as well as the DDS chip.

A good magnifying device will come in very handy during this process.

Good luck,

-mike/w1mt

--- On Sat, 7/19/08, Heinz <h_schnait@...> wrote:

>
> I am at the stage where all components except L3 are fitted
> to the
> board (page 23 of the manual). When I connect a 9V battery
> I see "8"
> on the LED display (for a second or so) and also hear
> "8" in the
> phones. Then I hear a continous sine tone in the
> headphones. The
> frequency is not influenced when adjusting CT1 (BFO trimmer
> cap).
>
> I can trace the signal with a scope and find it on pin 7 of
> U3 (Audio
> Amp) with 0.7Vpp It is not on pins 5 or 6 (?!?). I can
> further find it
> on pin 1 of U3 (0.6Vpp; slightly distorted) and on the 5V
> line with
> about 0.1Vpp.
>
> Voltages according to table on page 24 are OK with the
> following
> exceptions: pin 1 of U4 (Analog SPDT switch) is 2.48V
> (expected 2.2V)
> and pin 4 is 0V (expected 2.2V).
>

> I have resolded all pins of U4 with no effect.
>
> I can key my paddle and hear the proper side tone in the
> phones (The
> controller definetly works!). In between caracters I still
> can hear
> the annoying sine tone.
>
> Did I fry U4? Any ideas what I can check out next?
>
> 73 Heinz, OE5EEP
>

3365. Re: ATS-3b finished - not working :-(

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-20 20:28:13 UTC
From: Heinz
Topic: 3349 Message: 3365

Mike,

Thanks for your helpfull comments. I have also received some comments
off the list and will follow-up.

I have now borrowed a microscope and started a systematic screening of
solder joints under 50x magnification. I will let you know what I found...

73 Heinz

--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:
>
> Heinz,
>
> It does sound like U4 is or something around it might be the
culprit. Here are a few things to look at:
>
> The mute pin (pin 29 of the MPU) controls the digital switch (U6).
Make sure that the signal from the MPU is making it to the switch.
>
> The ripple on the 5V line should not be there (assuming the source
is not the power supply). So check every device that is fed by 5V and
make sure there are no solder bridges around the 5V input to those
devices. Finding this one should take care of the high current draw as
well.U3 may be a good first place to double check as well as the DDS chip.
>
> A good magnifying device will come in very handy during this process.
>
> Good luck,
>
> -mike/w1mt
>
>
> --- On Sat, 7/19/08, Heinz <h_schnait@...> wrote:
>
>
>
> >
> > I am at the stage where all components except L3 are fitted
> > to the
> > board (page 23 of the manual). When I connect a 9V battery
> > I see "8"
> > on the LED display (for a second or so) and also hear
> > "8" in the
> > phones. Then I hear a continous sine tone in the
> > headphones. The
> > frequency is not influenced when adjusting CT1 (BFO trimmer

> > cap).
> >
> > I can trace the signal with a scope and find it on pin 7 of
> > U3 (Audio
> > Amp) with 0.7Vpp It is not on pins 5 or 6 (?!?). I can
> > further find it
> > on pin 1 of U3 (0.6Vpp; slightly distorted) and on the 5V
> > line with
> > about 0.1Vpp.
> >
> > Voltages according to table on page 24 are OK with the
> > following
> > exceptions: pin 1 of U4 (Analog SPDT switch) is 2.48V
> > (expected 2.2V)
> > and pin 4 is 0V (expected 2.2V).
> >
> > I have resolded all pins of U4 with no effect.
> >
> > I can key my paddle and hear the proper side tone in the
> > phones (The
> > controller definetly works!). In between caracters I still
> > can hear
> > the annoying sine tone.
> >
> > Did I fry U4? Any ideas what I can check out next?
> >
> > 73 Heinz, OE5EEP
> >
>

3366. Run for the Bacon, 7/20/2008, 6:00 pm

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-21 00:41:33 UTC
From: AT_Sprint@yahoogroups.com
Topic: 3366 Message: 3366

Reminder from: AT_Sprint Yahoo! Group
http://groups.yahoo.com/group/AT_Sprint/cal

Run for the Bacon
Sunday July 20, 2008
6:00 pm - 8:00 pm
(This event repeats every month on the third Sunday.)
Location: Your shack or anywhere

Notes:
This Sunday evening, the Flying Pigs Amateur Radio Club International will be holding its monthly Run For The Bacon. This is a friendly, two hour QRP CW Sprint, which is open to ALL radio amateurs, will last from 9:00 - 11:00PM EDT (0200-0400 UTC Monday).

You may work stations once per band on 160, 80, 40, 20, 15 or 10 Meters. Suggested starting frequencies are 1.812, 3.562, 7.044, 14.062, 21.062, and 28.062 MHz.

The exchange is RST, S/P/C (State, Province, Country) and Flying Pigs membership number. If you're not a member of the Flying Pigs, and would like to be; then please cli

All Rights Reserved
Copyright ? 2008
Yahoo! Inc.
http://www.yahoo.com

Privacy Policy:
http://privacy.yahoo.com/privacy/us

Terms of Service:
http://docs.yahoo.com/info/terms/

3367. ATS-3b variable bandwidth filter experiments and other ideas

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-21 01:13:10 UTC
From: Vojtěch Bubník
Topic: 3367 Message: 3367

Hi gang.

I finally found time to experiment with variable bandwidth crystal filters. I copied the idea from Elecraft K1, K2 and KX1 transceivers. I replaced three shunt capacitors in crystal filter of Steve’s ATS-3b prototype with KB313 varactors. As I remember from crystal ladder filter theory, the filter is reasonably flat only if it is loaded with proper impedance for which it was designed. To make the filter wider, one decreases shunt capacities and increases matching impedance. The Elecraft variable bandwidth solution is clearly compromise having constant loading impedance, but varying shunt capacitors.

Elecraft is using 1SV149 silicon epitaxial (whatever it means) varactors in K1, K2 and KX1 transceivers. The varactor is special by having very high capacitance ratio C1V/C8V = 15(Min.) and Q=200 with C1V=340pF and C8V=20pF. For ATS-3b one would ideally need a varactor with C1V=150pF and C5V=20pF, but I know of no such device. There are varactors with C1V around 150pF, but these have the lower capacity too high or need too high voltage. So one will not use the full range of 1SV149 capacity for variable filter bandwidth.

I found KB313, varactor similar to 1SV149 made in OK land in cold war era. The shop stocks triplets of paired varactors for about $.50, good deal indeed. Dan’s small parts stocks similar high capacitance ratio varactors. I measured following capacities on KB313 varactors:

C0V=770pF
C1V=470pF
C3V=143pF
C8.8V=28pF

The last voltage 8.8V is not magical value. It is the voltage of a battery that I used to derive varactor reverse voltage.

I measured ATS-3b passband with noise generator and DL4YHF Spectrum Lab at earphone output and on AVC chip output. The earphone amplifier in ATS-3b is wired as Sallen-Key 600Hz band pass filter, so it has distinctive peak, which is roughly independent of the crystal filter bandwidth. I see two secondary peaks on the spectrogram, which I cannot explain. Anyone has an idea?

Here is the spectrum lab software:
http://dl4yhf.ssl7.com/spectra1.html

Here are the screenshots I made with Spectrum Lab with various varactor voltages. There is also a photo of the testing configuration. I am using 9V battery and 10k pot to get the variable varactor voltage. The board on the picture is actually a fixture for measuring varactors on a homebrew LC meter.
http://www.kufr.cz/~ok1iak/temp/ATS3b-filter/

I will test it on the air to receive SSB and AM. The variable bandwidth seems to me a useful feature. Even with the Sallen-Key CW audio peak filter the higher bandwidth of

crystal filter will make searching for the stations easier. Anyway, I plan to do some tinkering with Steve’s prototype and pour some more silicon into it. I have two Microchip I2C D/A converters and mechanical rotary encoder on my table. With various priorities, these are my plans for the future:

- Liberate most of the MSP430 display pins. The plan is to use 74HC164 shift register, feed it with two pins (clock and data) and connect display to its parallel output. This will free 7 CPU pins for other experiments, two of the freed pins may be used for A/D, like power meter, PSW meter or PSK31 envelope shape feedback.
- Perfect PSK31 envelope. Will consume one of the two I2C D/A converters.
- Variable crystal filter bandwidth. May consume the other I2C D/A converter. Maybe a simpler solution will work having two or three fixed bandwidths switched either with mechanical slide switch or by CPU.
- Reconfigure the earphone amplifier as low pass for SSB reception. Extend firmware to allow for both USB and LSB on all bands. This may not be possible for all bands because of limited DDS coverage:
3.5MHz is shifted to 4.9MHz IF by adding 1.4MHz DDS leading to USB detection. By subtracting 8.4MHz, one will get LSB image in the same IF filter.
7MHz is shifted to 4.9MHz IF by subtracting 2.1MHz DDS leading to LSB detection. By subtracting 11.9MHz one will get USB image in the same IF filter.
DDS maximum frequency limits this trick to 20m.
- If the earphone amplifier gets rewired as low pass, then add a new Sallen-Key CW 600Hz band pass filter and add a bypass circuit to switch it off when using wide crystal filter settings for SSB or AM RX.
- Tuning with mechanical encoder. Make tuning step smaller and increase tuning steps if one rotates the knob fast. Detentless encoders are hard to get, but fortunately it is usually easy to remove the detent. Will free two buttons for other purposes like bandwidth selection or RX mode selection.
- Programmable sidetone level. Probably only software change is needed. One may control amplitude by pulse width modulation of the sidetone pin.

I will implement these features when I have time and mind for it. It will be fun for sure. On the bottom side of the ATS-3b PCB there is plenty of solid ground plane to do some SMD dead bug creation with magnet wire and kapton tape. That will train my patience and steady hand. Hope I will spark off some other experimentators.

73, Vojtech OK1IAK, AB2ZA

3368. Re: typo in ATS-3B manual?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-21 02:52:51 UTC
From: kc7fys
Topic: 3359 Message: 3368

As an English teacher, I have just gotten used to the creative spelling of hams in general. It's a realm of engineering-types who generally share the spelling habits of artists and musicians. Their creative energies lie elsewhere. I know little about RF theory, but I can find spelling errors in anything. With me, it's a savant behavior. The case of hams drives home my idea that intelligence and creativity and spelling ability are not related.
Jonathan KC7FYS/7J1AWL

3369. Re: another ATS-3B came alive

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-21 03:42:16 UTC
From: radio_kx0r
Topic: 3361 Message: 3369

--- In AT_Sprint@yahoogroups.com, "Markus" <hb9brj@...> wrote:

Markus,

Congratulations on getting your rig running!

The filter modules for the various bands require careful adjustment in order to get optimum performance. Adjusting the turns and the capacitors will affect power output, current drain, efficiency, harmonic output, and peak RF drain voltage. The "stock" values you start with may not be a very good compromise.

The situation is complicated by the PA overcurrent sensor, which may trip on some bands if you adjust for power output close to 5W.

I posted papers on these adjustments in the FILES section on this site. The details will test your patience, but I believe the results are worth the time spent. It is possible to get nice performance on all six bands.

There is a large amount of information concerning the filter modules posted over the past several months here. Please use the SEARCH feature to find various messages dealing with adjusting the modules.

Good luck with tuning up your filter modules!

72/73

KX0R
Carey Fuller

> Hi all,
>
> Since the weatherman announced a rainy Sunday (which turned out to be
> totally wrong), I took the time to check and align my ATS-3B.
>
> Most alignments went really smooth. The reference oscillator was very
> close to its nominal frequency (guess less than 20Hz). Also the LO
> frequency trim required only a single click.
>
> On 15m (the only bad filter I have built so far) I measured 2W at 9V
> and 3.5W at 12V. So far I was not successful to bring the power up to
> the values mentioned in the manual. Seems to be really tricky on 15m.

>
> RX MDS is below 0.2uV, but the TX harmonics are not yet where they
> should be. Think this goes together with output power and needs more
> tweaking.
>
> Will build the 80m band filter next. Hopefully that one will be
easier
> to align.
>
> 73, Markus HB9BRJ
>

3370. Re: ATS-3b finished - not working :-(

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-21 14:30:58 UTC
From: jaakko330
Topic: 3349 Message: 3370

--- In AT_Sprint@yahoogroups.com, "Heinz" <h_schnait@...> wrote:

Hi Heinz,

> I have now borrowed a microscope and started a systematic screening of
> solder joints under 50x magnification. I will let you know what I
found...

You could also have a short circuit under some SMD component or some bad soldering that you do not see with the microscope. I check the contacts and shorts always with a multimeter. I wonder why that is not part of the standard check procedure - is there any issue of possible damage to the semiconductors? I remember that there used to be a recommendation to use a series resistor with the multimeter to proctect GaAs FETs when measuring them. See for example the ARRL UHF/Microwave Projects Manual. Anyway you need to take care of ESD during the construction and testing, otherwise you may get bizzare problems later and end up having 'almost' working radio.

73, Jaakko OH7BF/F5VGL

3371. Re: ATS-3b finished - not working :-(

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-21 14:49:20 UTC
From: japar
Topic: 3349 Message: 3371

I just finished building my ATS-3B a few days ago, and had the exact same problem. The problem was a bad solder connection on C17 (470 pf) next to R5. This caused U3a to oscillate. A touch of the iron, and the rig has worked since. This caused the ripple on the 5 V rail also. Maybe this is your problem also.

Good luck,
Jim, w5jaw

--- In AT_Sprint@yahoogroups.com, "Heinz" <h_schnait@...> wrote:
>
> Dear all,
>
> I have finished completion of my ATS-3b, but it is not working. It is
> one of the recent kits from KD1JV shipped in late June 2008.
>
> I am at the stage where all components except L3 are fitted to the
> board (page 23 of the manual). When I connect a 9V battery I see "8"
> on the LED display (for a second or so) and also hear "8" in the
> phones. Then I hear a continous sine tone in the headphones. The
> frequency is not influenced when adjusting CT1 (BFO trimmer cap).
>
> I can trace the signal with a scope and find it on pin 7 of U3 (Audio
> Amp) with 0.7Vpp It is not on pins 5 or 6 (?!?). I can further find it
> on pin 1 of U3 (0.6Vpp; slightly distorted) and on the 5V line with
> about 0.1Vpp.
>
> Voltages according to table on page 24 are OK with the following
> exceptions: pin 1 of U4 (Analog SPDT switch) is 2.48V (expected 2.2V)
> and pin 4 is 0V (expected 2.2V).
>
> I have resolded all pins of U4 with no effect.
>
> I can key my paddle and hear the proper side tone in the phones (The
> controller definetly works!). In between caracters I still can hear
> the annoying sine tone.
>
> Did I fry U4? Any ideas what I can check out next?
>
> 73 Heinz, OE5EEP
>

3372. Version Question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-21 14:59:30 UTC
From: japar
Topic: 3372 Message: 3372

I finished my build a couple of days ago, and am having lots of fun with my ATS-3B. I am new to this group, so forgive me if this has been covered in the past.

When I check version number on power up I get "V34". I see when scanning back on this forum a ways that W1MT has issued Version 5. Is my version really 3.4 or something like that? I just received this kit a couple of weeks ago.

The reason I ask is that everything seems to be working fine, but I find the iambic keying very difficult to handle, at any speed. I am an experience QRQ operator, using full "squeeze" iambic mode "B". There appears to be no hold-off timing, so am getting too many errors. Saw some mention somewhere that some keying changes had been made in later versions.

Thanks for any info on this.

Jim, w5jaw

3373. Re: [AT_Sprint] Version Question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-21 15:31:06 UTC
From: Michael Harnage
Topic: 3372 Message: 3373

You have Steve's version 3 and probably have the 40 meter board plugged in. Hence "V34" (version 3 band 4).

-mike/w1mt

--- On Mon, 7/21/08, japar <w5jaw@...> wrote:

>
> When I check version number on power up I get
> "V34". I see when
> scanning back on this forum a ways that W1MT has issued
> Version 5. Is
> my version really 3.4 or something like that? I just
> received this
> kit a couple of weeks ago.
>

3374. Re: Version Question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-21 18:49:27 UTC
From: Markus
Topic: 3372 Message: 3374

Hi Jim,

> The reason I ask is that everything seems to be working fine, but I
> find the iambic keying very difficult to handle, at any speed. I am
> an experience QRQ operator, using full "squeeze" iambic mode "B".
> There appears to be no hold-off timing, so am getting too many
> errors. Saw some mention somewhere that some keying changes had been
> made in later versions.

Same problem here. W1MT's v8 firmware allows to change between keyer
modes A and B. But you need extra hardware to do the programming.

A very nice - although not cheap - alternative is the "Code Cube" by
http://www.palm-radio.de/ that clips to their "Mini Paddle" which I
plan to use when operating /p.

First priority here however are the band modules. Different authors
have published proposals for improvement.

72, Markus HB9BRJ

3375. 471 replaced by 511?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-21 20:42:30 UTC
From: spitleaf
Topic: 3375 Message: 3375

Hello group,

Got started at my kit today and when I was going to mount the 11 471
0603 sized resistors (blue painted package) they were replaced by 511.
I guess that's 510 ohms? What I'm wondering is, is this just a mix up
when kitted or are they infact replaced?

Thanks,
Alexander

3376. "E" on XMIT... How do I determine if I blew my finals?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-22 00:42:55 UTC
From: kc7fys
Topic: 3376 Message: 3376

Good morning, it is a humid and sweltering day in JA1. Promises to be even hotter as the sun rises.
I have been mired in antenna pruning, so have not been paying attention--and might have blown my main output transistors.
With the 80, 40, and 20 meter modules in place I get E on transmit with 12V supply, but get a wee 80mW with 7.5V supply from a partially spent 9V battery. This is into a 50ohm Norcal Dummy load and into a resonant (1.6SWR) antenna that was working just fine the other day.
What steps should I follow to determine what's going on? Oddly, I get 6Watts out with the 15 meter module in place.
That doesn't make a bit of sense to me.
This is a working ATS3B that has been tested and tweaked on all modules without problems.
Replacing the finals from Tokyo will be no problem (I should have kept spares on hand, actually)--but I need to determine that's actually the problem, and I'm not totally on the wrong track.
Receive is normal, of course.
Jonathan KC7FYS/7J1AWL

3377. Re: "E" on XMIT... How do I determine if I blew my finals? Current limit mods..

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-22 04:25:41 UTC
From: radio_kx0r
Topic: 3376 Message: 3377

--- In AT_Sprint@yahoogroups.com, "kc7fys" <kc7fys@...> wrote:

Jonathan,

If you get 6W out on 15M, your finals are OK. 6W is too much, and I'm skeptical , but you're getting solid output, so the final mosfets are not burned out.

I have never blown my finals, but what I think happens is that one of them gets too hot, and then it shorts out. The rig won't transmit after that. because the current sensor would trip. It's also possible for the drain protection zener to short out if the load impedance is not matched right, but this also would make the transmitter short and trip the current sensor.

An SWR of 1.6 may be unacceptable to this rig. Depending on the magnitude and phase of the standing waves, the current drain may exceed the design limit, and then the current sensor will reset the micro and show an E. I think that this rig almost always needs a tuner when being used with an antenna, like it or not. Numerous tests on my bench convince me that the current drain moves around quite a bit, even with a moderate SWR of 1.3 or 1.4. If the current drain goes up much, like 10 or 20%, the sensor trips. This is especially true with 12 volts in.

I would not expect your symptoms on an accurate 50 ohm dummy load. That doesn't make sense, unless you're running on 12V or more, which could trip the current sensor. I had to alter the threshold on my current sensor up about 10% to give the rig a little margin for tuning. I think this is required if you want to run 12V in and 5W out.

I found that the current drain on my rig is highest on 15M, so it also doesn't make sense that your rig would work at full power on 15M and not on other bands.

To see if the current sensor is tripping, look at the collector of U5, MMBT2222A. If this goes low, like a volt or less, it resets the microcontroller on pin 7.

The current detector U12's output is partially controlled by resistor R47, originally 680 ohms. I put 5.6K in parallel with R47 - this lowers the output of U12 going into the base of Q5, allowing a higher current to flow through the finals before current trip occurs. I always tune with a resistive bridge (Dan Tayloe LED bridge device,

like the BLT uses) and a 6.7 ohm resistor in series with the 12V supply, and I don't get nuisance trips when tuning on any band, regardless of the mismatch. Only when the load is matched do I switch to "operate" and short out the series resistor in the battery pack.

Note that U12, the ZXCT1008 current detector, is not a threshold, comparator, or digital type device. It is a straight linear amplifier operating on the high side of the supply. The output at pin 3 is approximately proportional to the current through the sense resistor R48 (0.1 ohms).

This is why you can adjust the trip point by changing R47. You also could increase the trip current by reducing R48, the sense resistor. Putting 1 ohm in parallel with R48 (0.1 ohm) would increase the trip current by about 10%. Likewise, increasing R49 would also increase the trip current of the circuit.

I recommend you increase your trip current slightly if you plan to run with 12V and expect to get 5W out. If you set it too high, you risk blowing your finals.

Let's hope none of us is trying to run this precision radio on something like a wall-wart. I can't think of a worse way to screw the radio up and to wreck the performance. Many of these crude power supplies have an output MUCH higher than the nominal voltage stated on the cube. Using such a device may lead to permanent damage, and it would make it very difficult to adjust the RF modules correctly.

Only a regulated supply or low-resistance battery should be used for operating. Only a regulated supply should be used for adjustments and measurements.

We see a lot of comments here about running on "half-dead 9V batteries", etc. Steve Weber deserves a gold star for making a rig that will run on such a battery and deliver a legal signal...but using a crummy battery to run this little jewel makes no sense at all! That's like running a sports car on turpentine! This rig will do great stuff is you give it a decent battery. Try three lithium ion/polymer cells, 8-10 NiMH cells, a 12V battery with a silicon diode in series - you're going to be happy!

72/73

Carey
KX0R

> Good morning, it is a humid and sweltering day in JA1. Promises to
be
> even hotter as the sun rises.
> I have been mired in antenna pruning, so have not been paying
> attention--and might have blown my main output transistors.

> With the 80, 40, and 20 meter modules in place I get E on transmit
> with 12V supply, but get a wee 80mW with 7.5V supply from a
partially
> spent 9V battery. This is into a 50ohm Norcal Dummy load and into a
> resonant (1.6SWR) antenna that was working just fine the other day.
> What steps should I follow to determine what's going on? Oddly, I
get
> 6Watts out with the 15 meter module in place.
> That doesn't make a bit of sense to me.
> This is a working ATS3B that has been tested and tweaked on all
> modules without problems.
> Replacing the finals from Tokyo will be no problem (I should have
kept
> spares on hand, actually)--but I need to determine that's actually
the
> problem, and I'm not totally on the wrong track.
> Receive is normal, of course.
> Jonathan KC7FYS/7J1AWL
>

3378. Re: "E" on XMIT... How do I determine if I blew my finals? Current limit mods..

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-22 05:59:37 UTC
From: kc7fys
Topic: 3376 Message: 3378

--- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@...> wrote:
>
> --- In AT_Sprint@yahoogroups.com, "kc7fys" <kc7fys@> wrote:
>
> Jonathan,

> An SWR of 1.6 may be unacceptable to this rig. Depending on the
> magnitude and phase of the standing waves, the current drain may
> exceed the design limit, and then the current sensor will reset the
> micro and show an E. I think that this rig almost always needs a
> tuner when being used with an antenna, like it or not. Numerous
> tests on my bench convince me that the current drain moves around
> quite a bit, even with a moderate SWR of 1.3 or 1.4. If the current
> drain goes up much, like 10 or 20%, the sensor trips. This is
> especially true with 12 volts in.

I am using a battery from a computer UPS. The output is about
11.8-12.1. Today's behavior represents a major change from past
performance of this radio. Let me check that I'm right about that
weird 15M 5watts out--that part doesn't make sense.

I'll check that U5 that you mentioned.

The Norcal SMT 50-ohm dummy load trips the E. That's what I can't
figure out. I'll keep tweaking around--usually these issues are
something I am overlooking. Usually something obvious.

Back story--I am gearing up for a family trip to Vietnam, and have
tentatively obtained permission to operate mobile CW there. This might
be the first ATS rig in Vietnam, or maybe the first ATS3B. IF I can
get this weirdness ironed out.
Jonathan KC7FYS

3379. Re: "E" on XMIT... How do I determine if I blew my finals? Current limit mods..

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-22 07:25:44 UTC
From: kc7fys
Topic: 3376 Message: 3379

--- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@...> wrote:
>
> --- In AT_Sprint@yahoogroups.com, "kc7fys" <kc7fys@> wrote:
>
> Jonathan,
>
> If you get 6W out on 15M, your finals are OK. 6W is too much, and
> I'm skeptical , but you're getting solid output, so the final mosfets
> are not burned out.

Well, I took the board out and sprayed it with a flux cleaner spray
(it wasn't bad anyway, but there was a sort of whitish residue on a
lot of the solder joints on top of the board incidentally). Anyway,
now I can't reproduce the negative results I had last night when I
typed that long description.
I will consider your current limiting mod, however. But for now, hm--I
don't know what was causing my failures last night. I guess I'll have
to wait until it happens again. Who knows.
Thanks for your comments.
Jonathan KC7FYS

3380. R47 Mod implementation

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-22 08:38:01 UTC
From: kc7fys
Topic: 3376 Message: 3380

I spoke too soon.
I still have a new over-current 'sensitivity' that I didn't seem to
have before. I can get up to about 11.8V before getting the E on
30/40/80 into my dummy load. Although I can't explain why this change
might occur, I don't see anything wrong with the adding 5.6K to R47.
Dang it! It's on the bottom side of the board...
Jonathan

3381. Re: [AT_Sprint] R47 Mod implementation

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-22 11:54:39 UTC
From: Michael Harnage
Topic: 3376 Message: 3381

Or just use a diode to drop the supply voltage until you get time to take it apart and do the mod.

Was it working fine with the 12V supply? or with lower voltage?

Btw, I only have ever run my ATS rigs at 12V for testing. Just too many nuisance trips. Never in the field. Usually 7.4V or 9.6V with 11.1V max being the max I run it. I've got my trip circuitry stock for now.

-mike

--- On Tue, 7/22/08, kc7fys <kc7fys@...> wrote:

> From: kc7fys <kc7fys@...>
> Subject: [AT_Sprint] R47 Mod implementation
> To: AT_Sprint@yahoogroups.com
> Date: Tuesday, July 22, 2008, 9:38 AM
> I spoke too soon.
> I still have a new over-current 'sensitivity' that
> I didn't seem to
> have before. I can get up to about 11.8V before getting the
> E on
> 30/40/80 into my dummy load. Although I can't explain
> why this change
> might occur, I don't see anything wrong with the adding
> 5.6K to R47.
> Dang it! It's on the bottom side of the board...
> Jonathan

3382. Re: [AT_Sprint] 471 replaced by 511?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-22 11:59:33 UTC
From: Michael Harnage
Topic: 3375 Message: 3382

I don't know if Steve replaced them in the kit but those resistors are for current limiting. The 510 ohms should work just fine where the 470 ohms were.

-mike/w1mt

--- On Mon, 7/21/08, spitleaf <alexander.edblad@...> wrote:

> From: spitleaf <alexander.edblad@...>
> Subject: [AT_Sprint] 471 replaced by 511?
> To: AT_Sprint@yahoogroups.com
> Date: Monday, July 21, 2008, 9:42 PM
> Hello group,
>
> Got started at my kit today and when I was going to mount
> the 11 471
> 0603 sized resistors (blue painted package) they were
> replaced by 511.
> I guess that's 510 ohms? What I'm wondering is, is
> this just a mix up
> when kitted or are they infact replaced?
>
> Thanks,
> Alexander
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>

3383. RE: [AT_Sprint] R47 Mod implementation

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-22 12:00:58 UTC
From: Dale Putnam
Topic: 3376 Message: 3383

Johnathan,
Good evening, is the antenna lead from the board to the connector clear of any "too close" wiring? Would it be that something is touching the center lead of the connector?--...
...--Dale - WC7S in Wy

To: AT_Sprint@yahoogroups.comFrom: kc7fys@...: Tue, 22 Jul 2008 08:38:01 +0000Subject: [AT_Sprint] R47 Mod implementation

I spoke too soon.I still have a new over-current 'sensitivity' that I didn't seem tohave before. I can get up to about 11.8V before getting the E on30/40/80 into my dummy load. Although I can't explain why this changemight occur, I don't see anything wrong with the adding 5.6K to R47.Dang it! It's on the bottom side of the board...Jonathan

_____
Stay in touch when you're away with Windows Live Messenger.
http://www.windowslive.com/messenger/overview.html?ocid=TXT_TAGLM_WL_messenger2_072008

3384. Re: R47 Mod implementation

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-22 12:04:36 UTC
From: kc7fys
Topic: 3376 Message: 3384

Well, for now I am A-OK with 12V, and 9V for tuning up. Something's going on, because tonight I came up with my 40 module in, and was just fine into a 1.4 SWR on 7.030 +\-. HL2 could hear my signal, but couldn't copy it before QSB took him, but I worked up and down JA pretty well--indicating that last night's problem is strangely absent tonight. Not exactly comforting, knowing whatever I was doing wrong last night mysteriously disappeared. Anyway, my finals are not blown.

I do have a question, Harnage-san.
I want to change the annunciation speed, followed your cheatsheet to the menu--got in that mode, then realized I didn't know how to increase or decrease it. Paddles were non-responsive and pressing other buttons put me into different menus. How do I say, increase the annunciation speed? Is there a *set to default* in your firmware, in case I get out into the weeds and can't get things back to normal?
Thanks for your comments, I'm enjoying your firmware.
Jonathan

--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:
>
> Or just use a diode to drop the supply voltage until you get time to take it apart and do the mod.
>
> Was it working fine with the 12V supply? or with lower voltage?
>
> Btw, I only have ever run my ATS rigs at 12V for testing. Just too many nuisance trips. Never in the field. Usually 7.4V or 9.6V with 11.1V max being the max I run it. I've got my trip circuitry stock for now.
>
> -mike
>
>
>
> --- On Tue, 7/22/08, kc7fys <kc7fys@...> wrote:
>
> > From: kc7fys <kc7fys@...>
> > Subject: [AT_Sprint] R47 Mod implementation
> > To: AT_Sprint@yahoogroups.com
> > Date: Tuesday, July 22, 2008, 9:38 AM
> > I spoke too soon.
> > I still have a new over-current 'sensitivity' that
> > I didn't seem to
> > have before. I can get up to about 11.8V before getting the
> > E on

> > 30/40/80 into my dummy load. Although I can't explain
> > why this change
> > might occur, I don't see anything wrong with the adding
> > 5.6K to R47.
> > Dang it! It's on the bottom side of the board...
> > Jonathan
>

3385. Re: [AT_Sprint] Re: R47 Mod implementation

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-22 12:10:17 UTC
From: Michael Harnage
Topic: 3376 Message: 3385

I changed the annunciation set to mimic Steve's. Set your transmit speed normally. Then in the "P" menu TuneDown will set the annunciation speed equal to the transmit speed. Remember to click menu twice to completely exit P mode.

-mike/w1mt

--- On Tue, 7/22/08, kc7fys <kc7fys@...> wrote:

> I do have a question, Harnage-san.
> I want to change the annunciation speed, followed your
> cheatsheet to
> the menu--got in that mode, then realized I didn't know
> how to
> increase or decrease it.

3386. Re: R47 Mod implementation

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-22 12:17:36 UTC
From: kc7fys
Topic: 3376 Message: 3386

--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:
>
> I changed the annunciation set to mimic Steve's. Set your transmit speed normally. Then in the "P" menu TuneDown will set the annunciation speed equal to the transmit speed. Remember to click menu twice to completely exit P mode.
>
> -mike/w1mt

Thx.
Jonathan

3387. Re: "E" on XMIT... How do I determine if I blew my finals? Current limit mods..

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-22 13:28:52 UTC
From: kc7fys
Topic: 3376 Message: 3387

--- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@...> wrote:
>
> --- In AT_Sprint@yahoogroups.com, "kc7fys" <kc7fys@> wrote:
>
> Jonathan,
I put 5.6K in parallel with R47 - this
> lowers the output of U12 going into the base of Q5, allowing a higher
> current to flow through the finals before current trip occurs.
> Carey
> KX0R

Incidentally, did you use a regular 1/4 watt resistor there, or an SMD
kind of stacked?
Jonathan

3388. Re: "E" on XMIT... How do I determine if I blew my finals? Current limit mods..

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-23 02:38:00 UTC
From: radio_kx0r
Topic: 3376 Message: 3388

--- In AT_Sprint@yahoogroups.com, "kc7fys" <kc7fys@...> wrote:

Jonathan,

I think I used a 1/4W leaded resistor, but you can use whatever is convenient. The power is low, and the value certainly isn't critical.

Based on the information you've given us here, I can't see any reason for the changing behavior of your rig. It would make sense to examine all the solder connections related to Q5 and U12, just to make sure they're solid.

I wouldn't be running my rig at 12V and 5W if I didn't think I could replace the finals easily - they are cheap and easy to get. Also the "B" rig has an overcurrent sensor, and I have polyswitches and/or protection pcb's in all my battery packs - these protect against catastrophic shorts. Cheap insurance...

Good luck on your trip!!

72

Carey
KX0R

> --- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@> wrote:
> >
> > --- In AT_Sprint@yahoogroups.com, "kc7fys" <kc7fys@> wrote:
> >
> > Jonathan,
> I put 5.6K in parallel with R47 - this
> > lowers the output of U12 going into the base of Q5, allowing a
higher
> > current to flow through the finals before current trip occurs.
> > Carey
> > KX0R
>
> Incidentally, did you use a regular 1/4 watt resistor there, or an
SMD
> kind of stacked?
> Jonathan
>

3389. Re:[AT_Sprint] Re: "E" on XMIT. .. How do I determine if I blew my finals? Current limit mods ..

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-23 22:54:56 UTC
From: J. Haynes
Topic: 3389 Message: 3389

Well, all solder joints appear patent and in order-except for the odd white powdery residue. (I'll take macro photos later.)
The best I can conclude is that my overcurrent sensing has actually _started_ working right for the first time. In the past months I was occasionally getting 13v from 10 fully topped-off ni-mh AAs. That was never an issue and there were no trips. Now, 8 of the same cells (the "orange zone" on my KD1JV voltage indicator-11~11.9v)won't trip and gives me the full gallon.
Not explicable, but my signal's out there, so... (shrugs)
Going to keep extra 2N7000s around, if I can locate them here in JA.
Jonathan KC7FYS/7J1AWL

3390. Re: Low Audio?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-24 21:15:13 UTC
From: Jim Fraser
Topic: 3168 Message: 3390

I have still been looking at this problem on occasion as it is not yet resolved. I requested from Steve, received and replaced the AGC chip, but that did not help. The problem again is that the audio level on receive is very low with an antenna connected.

While poking around I happened to touch the band module with my finger and the receive noise increased a quite a bit (40m). I used an exacto knife as a probe to determine which point in the board is giving me the increase in noise level. The point is any component directly connected to pin 1 of the band module, the input to the RX circuit on the main board. The background noise level is about what I recall from when I first built the rig (this is a recent problem). The effect occurs with all band modules, but is most dramatic on 40m and 80m.

I checked the connections from the band module connector to the main PCB and it looks OK. Tracing back I thought it might be a problem with the QSK circuit not letting the receive signal through. I did some T/R voltage measurements and replaced Q2 and Q1, but the problem persists. The documentation states that on receive Q1 is turned off and Q2 is turned on. This allows Q2 to pass the signal from the TX low pass filter through to the RX's input tuned circuit on the band module. It seems that the signal is not passing through.

I am not sure how to interpret the voltage readings on the three FETs Q1, Q2, Q3 in the QSK circuit. The voltages in RX mode with the 40m band module installed are as follows:

Q1: Gate = 0v, Source = 0v, Drain = 0v -- OFF?
Q2: Gate = 3.5v, Source = 0v, Drain = 0v -- ON?
Q3: Gate = 3.5v, Source = 0, Drain = 0v

Does anyone experienced in FETs see a problem with these values? You may reply offline.

The transmitter does work putting around 4w at 12v (40m).

Jim K6JF

3391. 2008 Flight of the Bumblebees - July 27

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-25 13:39:07 UTC
From: scott mcmullen
Topic: 3343 Message: 3391

Pls note: the deadline for getting a bee number is rapidly approaching.

The 2008 running of the Adventure Radio Society's 'Flight of the Bumblebees' is on Sunday, July 27, and runs from 10:00 PDT/11:00 MDT/12:00 CDT/1:00 EDT to 2:00 PDT/3:00 MDT/4:00 CDT/5:00 EDT.

So far, 180 intrepid QRP operators have signed up to hike, bicycle, or paddle to an operating position and participate in the event as Bumblebee stations.

Participation from home stations is also welcome and encouraged.

Group operation is welcome in the Flight of the Bumblebees. You may operate under a single call and report a single score, or under multiple calls and report multiple scores. In any event, you are limited to operating a single transmitter at a time.

Maximum power is five watts. We operate CW on 40, 20, 15 and 10 meters, on the standard QRP frequencies. Each contact will receive one point. The same station can be worked on different bands for additional QSO points and multipliers.

The rules in full, and details about soliciting a bee number, are available at:

http://arsqrp.pbwiki.com/Flight+of+the+Bumblebees

Hope to hear you on the air during the 2008 ARS QRP FoBB

73
Scott
W5ESE

3392. Re: Version Question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-27 09:41:58 UTC
From: Markus
Topic: 3372 Message: 3392

> Same problem here. W1MT's v8 firmware allows to change between keyer
> modes A and B. But you need extra hardware to do the programming.

Corrections:
(1) Also Steve's ATS-3B soft does have iambic modes A and B.
Discovered it when reading the manual in detail.

(2) Reprogramming the microcontroller only requires a cable and
6 resistors, as described elsewhere in this forum.

Sorry for having posted incorrect information.

I'll give the W1MT firmware m008 a try, because I'm still a bit
unhappy with iambic mode B as implemented by Steve. Letters R and F
come out wrong most of the time. Am using Accu keyer and Idiom Press
CMOS Super Keyer since 30 years. Very difficult to adapt to something
different, hi.

73, Markus

3393. RE: [AT_Sprint] Re: Version Question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-27 13:47:19 UTC
From: Ken Lotts
Topic: 3372 Message: 3393

Ditto on the mode B problems. Supposed to be a fix coming down the pike.
Not sure if Mike's firmware has the fix.

Ken
aa7jc

-----Original Message-----
From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com]On
Behalf Of Markus
Sent: Sunday, July 27, 2008 2:42 AM
To: AT_Sprint@yahoogroups.com
Subject: [AT_Sprint] Re: Version Question

> Same problem here. W1MT's v8 firmware allows to change between keyer
> modes A and B. But you need extra hardware to do the programming.

Corrections:
(1) Also Steve's ATS-3B soft does have iambic modes A and B.
Discovered it when reading the manual in detail.

(2) Reprogramming the microcontroller only requires a cable and
6 resistors, as described elsewhere in this forum.

Sorry for having posted incorrect information.

I'll give the W1MT firmware m008 a try, because I'm still a bit
unhappy with iambic mode B as implemented by Steve. Letters R and F
come out wrong most of the time. Am using Accu keyer and Idiom Press
CMOS Super Keyer since 30 years. Very difficult to adapt to something
different, hi.

73, Markus

3394. W1MT's ATS-3B firmware

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-27 15:57:20 UTC
From: Markus
Topic: 3394 Message: 3394

Hi all,

Thanks to all who are contributing hardware (Steve), software (Steve and Mike) and useful hints here in this forum.

CW keying issues made me try Mike's firmware M008 dated 18JUN08. The DIY cable with 6 220 ohm resistors worked fine. The programming instructions were easy to follow, except the very last step: After hitting CTRL-D I didn't find any RUN button to click. Because the debugger log said something like "transfer verified" I simply unplugged my ATS-3B but was not sure if it was programmed or not. The version check then confirmed I have successfully uploaded Mike's firmware!

Good news: The CW keyer now works similar to the many "mode B" keyers I'm used to. Thanks Mike!

Next I started to work through the "cheat sheet", thinking the new commands were implemented on top of Steve's. This seems to be the case only partially. Soon I found out that RIT/XIT have been modified to a dual A/B VFO plus normal/split modes. I like it!

When changing the transmit speed I got no result whatsoever until I tried the paddle instead of UP/DOWN as indicated. Either it's a typo on the cheat sheet, or I'm doing something wrong.

To really get familiar with Mike's command set, I am planning to create a "quick reference" table situated somewhere in between the existing cheat sheet and a plain text description. Per function, it will list the user actions required as well as the ATS-3B's LED and acoustic responses.

Before reinventing the wheel, let me ask if somebody out there has done this work already.

73, Markus

3395. Re: [AT_Sprint] W1MT's ATS-3B firmware

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-27 23:30:06 UTC
From: Michael Harnage
Topic: 3394 Message: 3395

Markus,

Glad you like it!!!

Regarding changing speeds, I need to change the cheatsheet to match actions. :)

It's this way because I added subroutines to handle checking for dit's and dah's. You will notice that to change speed, when you are in button paddle mode, the tune down and tune up buttons will change the speed.

-mike/w1mt

--- On Sun, 7/27/08, Markus <hb9brj@...> wrote:

>
> Good news: The CW keyer now works similar to the many
> "mode B" keyers
> I'm used to. Thanks Mike!
>
> Next I started to work through the "cheat sheet",
> thinking the new
> commands were implemented on top of Steve's. This seems
> to be the case
> only partially. Soon I found out that RIT/XIT have been
> modified
> to a dual A/B VFO plus normal/split modes. I like it!
>
> When changing the transmit speed I got no result whatsoever
> until I
> tried the paddle instead of UP/DOWN as indicated. Either
> it's a typo
> on the cheat sheet, or I'm doing something wrong.
>

3396. RE: [AT_Sprint] Re: Version Question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-27 23:56:37 UTC
From: Michael Harnage
Topic: 3372 Message: 3396

My 3B firmware does indeed have improved iambic timing. Several hi-speed ops have told me they like it. Eventually, I will port it to my ATS2,3,3A version.

I have to give thanks to Dave/WA3OFF for his software insight in this area and other areas that are not so apparent. He has been a huge help.

-mike/w1mt

--- On Sun, 7/27/08, Ken Lotts <ken@...> wrote:
From: Ken Lotts <ken@...>
Subject: RE: [AT_Sprint] Re: Version Question
To: AT_Sprint@yahoogroups.com
Date: Sunday, July 27, 2008, 2:47 PM

Ditto
on the mode B problems. Supposed to be a fix coming down the pike.
Not sure if Mike's firmware has the fix.

Ken
aa7jc

3397. Re: Low Audio?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-07-28 04:55:20 UTC
From: Jim Fraser
Topic: 3168 Message: 3397

Well, my 3B has it ears back again! Thanks to a tracing tip from Mike (w1mt) I determined that I was losing the antenna signal at capacitor C41. Luckily I had one spare left and decided to replace it.

To my surprise when I heated up one end and applied the solder sucker the whole device disappeared! I opened the sucker to retrieve it and found that tip of one end was missing, the capacitor was cracked. I wonder if this was from a little flexing the board took when fitting it into the Altoids case? It is also pretty close to the band module connector which could flex a little too.

Anyway, the rig is now safely in its enclosure. Made one QSO on 40m with a station near Portland, OR (560 miles) last night who gave me a 479. No luck today on 20m, very poor conditions here. Tonight I worked into Farmington, UT (597 miles) on 40m where I was 559. This is running about 4w out to Hamstick verticals on my second floor balcony with a BLT tuner. I am soon going to try a wire vertical using a 31ft fiberglass pole I have which I hope gives me a better signal.

Thanks to Mike (w1mt) and Tom (k9ac) for their suggestions off line. Conditions permitting, anyone in the Rockies and points West can listen for me on 7030 or 7040 around 0200-0400UTC.

72,
Jim K6JF

3398. ATS-3B Builder in St. Louis?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-01 04:57:38 UTC
From: David Gauding
Topic: 3398 Message: 3398

I about to send my check off to KD1JV for an ATS-3B.

Wondering if there is an ATS-3B builder or operator in the St. Louis, MO area available to share experiences, provide guidance, etc.?

All of my scratchbuilt and kit projects have been thru-hole so SMT is scary. It's probably one reason why I have waited so long - and hopefully not too long - to order a kit.

I'm recently retired so now have the time to build and run portable at a more relaxed pace. It's gonna' be fun! <g>

Thanks,

Dave, NF0R

3399. RE: [AT_Sprint] ATS-3B Builder in St. Louis?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-01 11:42:51 UTC
From: Dale Putnam
Topic: 3398 Message: 3399

Congrats Dave, you will have a blast... wish we were closer.
or gas was lower. maybe help can be as close as this list... there are some fellows here that are mighty experienced with them. All you need to do is ask... and yes it is a whole lotta fun.
Good Luck, --... ...--Dale - WC7S in Wy

To: AT_Sprint@yahoogroups.comFrom: dgauding@...: Fri, 1 Aug 2008 04:57:38 +0000Subject: [AT_Sprint] ATS-3B Builder in St. Louis?

I about to send my check off to KD1JV for an ATS-3B.Wondering if there is an ATS-3B builder or operator in the St. Louis,MO area available to share experiences, provide guidance, etc.?All of my scratchbuilt and kit projects have been thru-hole so SMT isscary. It's probably one reason why I have waited so long - andhopefully not too long - to order a kit.I'm recently retired so now have the time to build and run portable ata more relaxed pace. It's gonna' be fun! <g>Thanks,Dave, NF0R

_____
Time for vacation? WIN what you need- enter now!
http://www.gowindowslive.com/summergiveaway/?ocid=tag_jlyhm

3400. Re: ATS-3B Builder in St. Louis?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-01 13:50:26 UTC
From: Randal
Topic: 3398 Message: 3400

Dave you're going to love your Bee AND you're going to enjoy BUILDING it. SMT construction, you will find, is perhaps the easiest thing that you have tackled lately. This great "mystery" about SMT and the resulting fear is just bunk. Get yourself (if you don't already have) a good SMT soldering station and a good set of binocular magnifiers (visor). Read as much as you can stand about SMT technique (Goggle), practice by un-soldering odd ball components from a junk box pcb like a PC modem board or the like.

Getting to the adequate stage will take you a couple of attempts with the junk board from there it is just like getting to Carnegie Hall practice, practice, practice.

You CAN build it your self and there are a bunch of folks here to provide support should you need it. Download and read the manual a few times to acquaint yourself with the rig while your waiting for it. You will find that the manual is pretty darn good. If you follow the script you will do just fine.

Go for it.

73,
Ran - W1IN

--- In AT_Sprint@yahoogroups.com, "David Gauding" <dgauding@...> wrote:
>
> I about to send my check off to KD1JV for an ATS-3B.
>
> Wondering if there is an ATS-3B builder or operator in the St. Louis,
> MO area available to share experiences, provide guidance, etc.?
>
> All of my scratchbuilt and kit projects have been thru-hole so SMT is
> scary. It's probably one reason why I have waited so long - and
> hopefully not too long - to order a kit.
>
> I'm recently retired so now have the time to build and run portable at
> a more relaxed pace. It's gonna' be fun! <g>
>
> Thanks,
>
>
>
> Dave, NF0R
>

3401. Re: [AT_Sprint] Re: ATS-3B Builder in St. Louis?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-01 15:23:30 UTC
From: Kurt Savegnago
Topic: 3398 Message: 3401

Steve is out of town for a hike according to the webpage so don't get concerned if you don't get an immediate response.

He does repair work for Small Wonders Labs and he fixed my DSW-II. A small gob of solder was in between two of the legs of a 2N7000 transistor. Fixed it just fine.

Only problem I had is I connected it up to a PAC-12 and turned it on. It started to cycle up and went dead. I looked at horror and saw the tap fell off the tuning coil! Man am I depressed. It worked so well into the dummy when I got it back from him.

Waiting for him to come back and see if I can send it back for him to resurrect. My fault.

Kurt KC9LDH

3402. ATS-3B Builder in St. Louis (follow-up)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-02 03:59:47 UTC
From: David Gauding
Topic: 3402 Message: 3402

News!

Thanks very much to KC9LDH, W1IN and WC7S for their comments and encouragement. You are appreciated!

My sense is the ATS-3B is something I just have to build. I've been running portable since 1981 (the old HW-8 and Argonaut 509 days). This will be quite a nice change for the OM on the hardware side.

I also heard words of encouragement from ATS-3B builder N0AL who lives (believe it or not) only about three miles down down the road. I look forward to meeting with Alan and talking radio sooner than later.

It appears the AT Sprint newsgroup is a great amateur radio resource for builders and experimenters. I look forward to contributing in the months ahead.

Dave, NF0R

3403. ATS-3B Builder in St. Louis (follow-up)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-02 04:40:11 UTC
From: David Gauding
Topic: 3402 Message: 3403

News!

Thanks very much to KC9LDH, W1IN and WC7S for their comments and encouragement. You are appreciated!

My sense is the ATS-3B is something I just have to build. I've been running portable since 1981 (the old HW-8 and Argonaut 509 days). This will be quite a nice change for the OM on the hardware side.

I also heard words of encouragement from ATS-3B builder N0AL who lives (believe it or not) only about three miles down down the road. I look forward to meeting with Alan and talking radio sooner than later.

It appears the AT Sprint newsgroup is a great amateur radio resource for builders and experimenters. I look forward to contributing in the months ahead.

Dave, NF0R

3404. RE: [AT_Sprint] ATS-3B Builder in St. Louis (follow-up)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-02 05:24:03 UTC
From: Rob May
Topic: 3402 Message: 3404

After building four of the ATS series, I have to say that they are my favorite radio to build. I dread doing through hole soldering anymore, sticking a few parts through, bending the leads, flipping the board over, soldering, only to find one has slipped a bit and is not perfectly flat on the board. Instead, put a dab (tiny!) on the board, slide part in place, tack one side, solder the other and you're done. Well, not quite that easy at first, but it gets easier. I suggest spending $7 and building the Norcal dummy load for practice. Forty resistors to practice your technique and you have a useful QRP tool.
Rob
NV5E

To: AT_Sprint@yahoogroups.com
From: dgauding@sbcglobal.net
Date: Sat, 2 Aug 2008 04:40:11 +0000
Subject: [AT_Sprint] ATS-3B Builder in St. Louis (follow-up)

News!

Thanks very much to KC9LDH, W1IN and WC7S for their comments and

encouragement. You are appreciated!

My sense is the ATS-3B is something I just have to build. I've been

running portable since 1981 (the old HW-8 and Argonaut 509 days). This

will be quite a nice change for the OM on the hardware side.

I also heard words of encouragement from ATS-3B builder N0AL who lives

(believe it or not) only about three miles down down the road. I look

forward to meeting with Alan and talking radio sooner than later.

It appears the AT Sprint newsgroup is a great amateur radio resource

for builders and experimenters. I look forward to contributing in the

months ahead.

Dave, NF0R

Time for vacation? WIN what you need- enter now!
http://www.gowindowslive.com/summergiveaway/?ocid=tag_jlyhm

3405. Re: ATS-3B Builder in St. Louis (follow-up)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-02 15:12:18 UTC
From: Par
Topic: 3402 Message: 3405

wow, 4 ats3bs.

I have been on the verge of taking the plunge.
whats the chance of someone with this type of experience posting a real straight forward post about the dos and donts of this project??? most difficult procedures and ways to deal with them etc etc.

I would give my neighbors cat for a good resource like that.

Most of us have some basic solder skills. I am in the middle of a bare-bones K2 and hopefully when I get finished, I should be ready for the SMT.

Could you list some of the best recommended sites or prep kits for this method of work / soldering. I have heard that someone actually produced such a training kit.

Also, a list of hints for tools, bino magnifiers?, OK what power?? Favorite solder station, and working temp?? things that make smt easier. wax on a toothpick, ok, kool but scary.

Ok, just my dream to put me over the edge and past the fear factor of the unknown and get me into the 3b kit.

tnx fer any considerations,
73s

w3par sitefix@...

--- In AT_Sprint@yahoogroups.com, Rob May <roblitespeed@...> wrote:
>
>
> After building four of the ATS series, I have to say that they are my favorite radio to build. I dread doing through hole soldering anymore, sticking a few parts through, bending the leads, flipping the board over, soldering, only to find one has slipped a bit and is not perfectly flat on the board.

3406. RE: [AT_Sprint] Re: ATS-3B Builder in St. Louis (follow-up)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-02 15:55:36 UTC
From: Rob May
Topic: 3402 Message: 3406

Feel free to email me with any questions about the build when you get to it. I like to use a magnifying desk lamp. I think it's about a 3 diopter. Some times I use the flip down magnifiers that you wear on your head. (Don't try to adjust it with a soldering iron in your hand, I burned my ear! Don't laugh!) The hardest part to mount is the DDS chip, the leads are half the pitch of the rest of the parts and it's kind of expensive, about $10 I think. Use the thinnest solder possible. Steve includes some with the kit. Radio Shack sells .015 that works well too. I use a regular cheapo Elenco soldering station or my old Radio Shack iron. The size of the solder is more important than the size of the tip. I like a chisel shaped tip because it transfers heat faster than a pointy one. I like to work with a hot iron and work fast.

Many people on this list have used the Cash Olsen toaster oven/hot plate method. The results are amazing, it looks like a factory job. I don't do this because I get a lot of enjoyment out of soldering. This group is full of people who know much more about these rigs than me and there will be no shortage of help.

For the record, I've built and ATS-3, 2 ATS-3A's and one ATS-3B. I currently own the 3 and the 3B. I would like to sell the 3B if anyone is interested ($190, pictures, details on request). I have a K3 on the way, got the Katiegram last week!

Rob
NV5E

To: AT_Sprint@yahoogroups.com
From: sitefix@...
Date: Sat, 2 Aug 2008 15:12:18 +0000
Subject: [AT_Sprint] Re: ATS-3B Builder in St. Louis (follow-up)

wow, 4 ats3bs.

I have been on the verge of taking the plunge.

whats the chance of someone with this type of experience posting a

real straight forward post about the dos and donts of this project???

most difficult procedures and ways to deal with them etc etc.

I would give my neighbors cat for a good resource like that.

Most of us have some basic solder skills. I am in the middle of a

bare-bones K2 and hopefully when I get finished, I should be ready for

the SMT.

Could you list some of the best recommended sites or prep kits for

this method of work / soldering. I have heard that someone actually

produced such a training kit.

Also, a list of hints for tools, bino magnifiers?, OK what power??

Favorite solder station, and working temp?? things that make smt

easier. wax on a toothpick, ok, kool but scary.

Ok, just my dream to put me over the edge and past the fear factor of

the unknown and get me into the 3b kit.

tnx fer any considerations,

73s

w3par sitefix@...

Recent Activity

3
New Members

Visit Your Group

Biz Resources
Y! Small Business
Articles, tools,
forms, and more.

Best of Y! Groups
Discover groups
that are the best
of their class.

Healthy Living
Learn to live life
to the fullest
on Yahoo! Groups.

.

_____
Got Game? Win Prizes in the Windows Live Hotmail Mobile Summer Games Trivia Contest
http://www.gowindowslive.com/summergames?ocid=TXT_TAGHM

3407. First Contact!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-02 21:07:46 UTC
From: nwgarner
Topic: 3407 Message: 3407

http://tcp25.net/n3wg-3b.jpg

I received that ATS-3B about a month ago and it made its first contact today! I went down the street to Ulistac Natural Area, Santa Clara, CA, and hung a wire dipole off some branches and started calling CQ on 14.060. N7VOE in WA quickly returned my call and we had a quick QSO. This was also my first CW QSO in about 6 years since I moved out here from the east coast. This is a great little radio that I had a lot of fun building. I'm looking forward to it coming with me on my next backpacking trip.

73,
Nick
N3WG

3408. Re: First Contact!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-03 03:11:21 UTC
From: radio_kx0r
Topic: 3407 Message: 3408

--- In AT_Sprint@yahoogroups.com, "nwgarner" <nwgarner@...> wrote:
>

Nick,

We actually don't yet know how incredible these radios are! We're just beginning to explore what can be done with small, portable, efficient HF radios.

If you keep going outside with your ATS rig, and using it in new places, you'll soon be exploring relatively new territory.

Remember that this is solar minimum, and there are no sunspots. The ultraviolet flux from the sun is at rock-bottom, and our ionosphere is much less ionized than it will be in a few years. When the sunspots come back, and we can utilize fine propagation on the 17 and 15 meter bands, we'll be working DX all over the world with almost no radio at all.

In the Flight of the Bumblebees event last weekend, I worked a whole bunch of fine ops from a small mountaintop near here, and my ATS-3B performed perfectly in the noontime summer heat. I was running 12V in, 5W out, and the whole box was warm! I worked 33 states and provinces in 4 hours, and made more than 80 QRP-QRP contacts, sitting in the pine trees. All my radio gear weighed only a few pounds, and the ATS rig was an insignificant part of the total! The antenna, feedline, and related items are now the limiting factor in portable operation.

Every time I take this rig outside and set it up somewhere new, it blows me away! I really hope you have similar experiences, which are virtually guaranteed if you use the radio outdoors.

72

Carey Fuller
KX0R

> http://tcp25.net/n3wg-3b.jpg
>
> I received that ATS-3B about a month ago and it made its first
contact
> today! I went down the street to Ulistac Natural Area, Santa
> Clara, CA, and hung a wire dipole off some branches and started
> calling CQ on 14.060. N7VOE in WA quickly returned my call and we
had
> a quick QSO. This was also my first CW QSO in about 6 years since I

> moved out here from the east coast. This is a great little radio
that
> I had a lot of fun building. I'm looking forward to it coming with
me
> on my next backpacking trip.
>
> 73,
> Nick
> N3WG
>

3409. Re: ATS-3B Builder in St. Louis (follow-up)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-03 03:48:45 UTC
From: radio_kx0r
Topic: 3402 Message: 3409

--- In AT_Sprint@yahoogroups.com, "Par" <sitefix@...> wrote:

W3PAR,

I built my ATS-3A using a pointed iron and fine solder, one joint at a time, and it worked/works great. Just use plenty of really bright light, use quality magnification, use good tweezers, and practice on some junk SMT boards before starting the assembly.

After considerable uncertainty I decided to build my ATS-3B using solder paste from Cash Olson and a hot air embossing tool from Hobby Lobby. I placed most of the parts and reflowed the solder on Halloween night, with the critical melting happening right at midnight, by some strange twist of forces beyond my understanding. After touching up a few bridges, I went through the tests and alignment, and the radio ran perfectly, with no significant issues related to assembly!

There is a HUGE amount of material on this group site about the various methods of assembly, the tools, issues, etc. Many of us posted a whole lot of discussion material months ago, when we were building our rigs. We've traded a lot of ideas in a very positive and pleasant way.

Although it will take some time to find and read our posts, you might want to dig through what we wrote, if only to get some confidence, and to realize that most of us (at least those who posted stuff here) had a good experience!

We aren't going to write all that stuff again, but it's all here, and all you have to do is to use the easy SEARCH feature to find a whole bunch of useful comments and tips. Of course we don't all agree on details and methods, and some builders are much more conservative than others....

The best advice we have is:

1) Order a Norcal dummy load and build it. It's a good, accurate dummy load, and it lets you make decent power measurements as well. You'll gain confidence from this low-cost project.

2) Get some junk SMT boards and practice removing and resoldering the parts.

3) Read Steve's manual carefully, and follow his instructions. Most who have had problems did not do this well enough.

4) Once you have your ATS-3B rig assembled, don't flex the board.
This is a known killer of SMT parts and boards.

5) When you get your rig working, search and read all the volumes of
stuff here about the filter modules, the overcurrent detector, using
tuners, batteries, etc.

6) If you get stuck or have a nasty problem, post to the group here,
since some of us still check this site occasionally, even though
we're mostly using our rigs now, not building and adjusting them.

If you get through the whole thing and spend some time adjusting your
radio, there's a good chance you'll agree that it's one of the
greatest kits ever sold. It's also a ticket to new radio
experiences, if you take it outside and go portable.

72,

Carey Fuller
KX0R

> wow, 4 ats3bs.
>
> I have been on the verge of taking the plunge.
> whats the chance of someone with this type of experience posting a
> real straight forward post about the dos and donts of this
project???
> most difficult procedures and ways to deal with them etc etc.
>
> I would give my neighbors cat for a good resource like that.
>
> Most of us have some basic solder skills. I am in the middle of a
> bare-bones K2 and hopefully when I get finished, I should be ready
for
> the SMT.
>
> Could you list some of the best recommended sites or prep kits for
> this method of work / soldering. I have heard that someone actually
> produced such a training kit.
>
> Also, a list of hints for tools, bino magnifiers?, OK what power??
> Favorite solder station, and working temp?? things that make smt
> easier. wax on a toothpick, ok, kool but scary.
>
> Ok, just my dream to put me over the edge and past the fear factor
of
> the unknown and get me into the 3b kit.
>
> tnx fer any considerations,
> 73s
>
> w3par sitefix@...
>

>
>
>
> --- In AT_Sprint@yahoogroups.com, Rob May <roblitespeed@> wrote:
> >
> >
> > After building four of the ATS series, I have to say that they are
> my favorite radio to build. I dread doing through hole soldering
> anymore, sticking a few parts through, bending the leads, flipping
the
> board over, soldering, only to find one has slipped a bit and is not
> perfectly flat on the board.
>

3410. Come join the NAQCC!!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-05 16:52:05 UTC
From: NAQCC
Topic: 3410 Message: 3410

Come join the NAQCC and help us in our mission to preserve and encourage CW activity on our amateur bands. The NAQCC (North American QRP CW Club) is for ALL CW enthusiasts around the world.

Our members include "Big Gun" contesters, hard-core QRPers, experimenters, ragchewers and SWLers; young and old alike. As different as we may be, we all share one thing in common, and that is our love for CW.

We welcome all who want to help support CW and have at least some interest in using QRP from time-to-time. Our club runs monthly sprints and challenges. Plus we sponsor some additional special on-air activities during the year.

Membership is free and once you join you're automatically a lifetime member! So sign up today and help us keep CW alive and well.

Visit our web site at http://www.arm-tek.net/~yoel/. You'll find info on our various activities plus an online membership application.

We look forward to your support and hope to soon see your call added to our membership roster.

73,
Paul/KD2MX
NAQCC Membership Recruiter

On behalf of:
Tom, WY3H - NAQCC President
John, K3WWP - NAQCC Vice President
Larry, W2LJ - NAQCC Asst. Publicity Director
Dave, VA3RJ/VE3JDR - NAQCC Publicity Officer
Norm, VE3SIC, Canadian & DX Publicity Officer

3411. ATS3A reduce output power to 1W

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-05 19:32:11 UTC
From: pks57
Topic: 3411 Message: 3411

Hi,

in order to participate in a VLP contest I would like to reduce the output power of my ATS3A to 1W. Using an attenuator at the antenna output seems a very inefficient way as it would draw unnecessary power from the battery (portable operation).
The output power is also reduced when lowering the input voltage, but I'm not sure if it can be brought below 1W while having still enough voltage to keep the rig working (haven't tried yet though).

Any suggestions? Of course a reversible solution would be preferable.

thanks and vy72, Peter / HB9TVK

3412. RE: [AT_Sprint] ATS3A reduce output power to 1W

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-05 19:38:34 UTC
From: Rob May
Topic: 3411 Message: 3412

Peter,
The ATS-3A will put out about 1 watt with 6V in. That is high enough for everything else in the radio to work. Adjust the spacing of the windings on the toroids if you need to go up or down a bit to get at the 1 watt level.
Rob
NV5E

To: AT_Sprint@yahoogroups.com
From: peter.kohler@switzerland.org
Date: Tue, 5 Aug 2008 19:32:11 +0000
Subject: [AT_Sprint] ATS3A reduce output power to 1W

Hi,

in order to participate in a VLP contest I would like to reduce the

output power of my ATS3A to 1W. Using an attenuator at the antenna

output seems a very inefficient way as it would draw unnecessary power

from the battery (portable operation).

The output power is also reduced when lowering the input voltage, but

I'm not sure if it can be brought below 1W while having still enough

voltage to keep the rig working (haven't tried yet though).

Any suggestions? Of course a reversible solution would be preferable.

thanks and vy72, Peter / HB9TVK

_____
Got Game? Win Prizes in the Windows Live Hotmail Mobile Summer Games Trivia Contest
http://www.gowindowslive.com/summergames?ocid=TXT_TAGHM

3413. Re: ATS3A reduce output power to 1W

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-06 03:57:47 UTC
From: radio_kx0r
Topic: 3411 Message: 3413

--- In AT_Sprint@yahoogroups.com, "pks57" <peter.kohler@...> wrote:

Peter,

The ATS-3A and ATS-3B will run very well with about 6.0V applied to the power connector. My ATS-3B puts out about 1.2W on all the bands when run off a regulated 6.0V supply. I have posted a set of data showing power outputs for 6, 9, and 12V on the various bands. Please see the FILES section for the numbers I recorded. Your results will depend on how you have adjusted your filter modules.

The power output can be varied by adjusting the transmit toroids of the filter module for the band you're planning to use for the low-power event.

If you need a bit of attenuation, just add 10, 20, or more feet of RG-174 coax to the output. Using this coax will allow you to shave off a little power if needed. According to the program Transmission Line Details, at 14 MHz 16 feet of RG-174 will reduce the power by 0.1W if the input is 1.0W, assuming a 50-ohm load. This is about .46 db. The ARRL program TLW has slightly different data and yields a slightly greater loss, so you may want to verify your power with a meter if you use RG-174 for the "adjustment". Of course an attenuator using fixed resistors would be easy to make for the 1-watt level.

The minimum supply voltage is 5.5V, according to the manuals for both ATS-3A and -B. If you go below that, you may/will experience a variety of problems. Remember that the transmitter will pull down your supply voltage when you hold the key down, so you have to make sure that you have enough voltage - do some tests on your particular DC supply. I don't recommend using any kind of weak batteries, since the voltage will eventually fall below the minimum when you key the rig, causing it to stop running, just when you need it to be there for you.

If you're using an ATS-3A, be sure to check the keying at low voltage. The mod I did on mine to improve the keyed wave when running on 12V made the rig useless at 6V. I still need to implement the shaping circuit Steve used in the "B" model - that is a nice improvement.

If by some chance you have a QBSA, you can just turn down the supply regulator "knob" to get the power you need.

72,

Carey Fuller
KX0R

> Hi,
>
> in order to participate in a VLP contest I would like to reduce the
> output power of my ATS3A to 1W. Using an attenuator at the antenna
> output seems a very inefficient way as it would draw unnecessary
power
> from the battery (portable operation).
> The output power is also reduced when lowering the input voltage, but
> I'm not sure if it can be brought below 1W while having still enough
> voltage to keep the rig working (haven't tried yet though).
>
> Any suggestions? Of course a reversible solution would be preferable.
>
> thanks and vy72, Peter / HB9TVK
>

3414. Re: [AT_Sprint]Emtech zm-2 ATU

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-06 20:54:57 UTC
From: Asfco
Topic: 3414 Message: 3414

I have am Emtech ZM-2 ATU that is not working. Built this awhile back but never got around to testing it ....my ATS 3a works quite well with my tribander so I really never needed it..until now I would like to use it on 40 with an inverted V.
Anyone out there with experience with one of these that would be willing to have a look and see if they can get it cooking?
73
John W2GB .

3415. Re: [AT_Sprint]Emtech zm-2 ATU

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-07 04:29:15 UTC
From: Markus
Topic: 3414 Message: 3415

John,

I'm currently building the ZM-4 from www.qrpshop.de, a derivative of the ZM-2.

What exactly do you mean by "not working"?

As a preliminary exercise, did you try to match different resistors (such as 10, 22, 47, 100, 220, 470 ohms)? From all what I've read so far, the Z-match is very delicate to adjust because it's a resonant circuit.

73, Markus

3416. Quick reference for W1MT's ATS-3B firmware uploaded

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-07 20:28:36 UTC
From: Markus
Topic: 3416 Message: 3416

Hi all,

After having uploaded Mike's M8 (June 2008) firmware to my ATS-3B, I tried all commands and wrote down how the ATS-3B responds (LED display, CW, other). The resulting list in PDF format is available in the Files section of this group.

If you find any errors or commands missing, or have suggestions how to improve the list, please let me know.

73, Markus

3417. Re: ATS3A reduce output power to 1W

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-07 22:50:56 UTC
From: pks57
Topic: 3411 Message: 3417

Dear Rob and Carey,

thanks a lot for your input. I made some measurements and can confirm that it works as you suggested!

I first tried to use 5 NiMH cells, however fully charged they're delivering 6.7V which resulted in an output power of about 1.2W (after ca. 40ft of RG174 into a dummy load). While discharging they were dropping below 6.0V which isn't good either.

Using a stabilized source of 6.0V resulted in exactly 1W on 20 and 80m, and about 870mW on 40m (seems the 40m module is not optimally tuned).

So I'm going to find some decent DC-DC converter and will use one of the 11.1V or 14.8V LiPo packs I've got around here. So I'll be able to avoid the voltage dropping below 6.0V too soon.

Thanks again and best 72,

Peter / HB9TVK

3418. Link to Markus' PDF on W1MT firmware

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-08 15:36:47 UTC
From: Jonathan
Topic: 3418 Message: 3418

HERE is a link to that file, in case it doesn't appear to you.
Unlike new photos added, new files don't appear when accessing the "NEW FILE" heading in the digest email.
73,
Jonathan KC7FYS

3419. RE: [AT_Sprint] Link to Markus' PDF on W1MT firmware

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-08 18:36:18 UTC
From: Ted W2TAG
Topic: 3418 Message: 3419

Jonathan,

You might want to try again as:

http://f1.grp.yahoofs.com/v1/cF-cSAKYiQYGggsStGk_5V939O7AkZ99dIJfn5KQ5oZ
UtVLgCnp5F2Dps2m_ksdtM1THGsHFQX4TJyS7FuZ2rj_PXmU7/W1MT_quick_ref.pdf

Gets me:

Document Not Found

The document you requested could not be found.

Ted, W2TAG

Jonathan wrote:

HERE
<http://f1.grp.yahoofs.com/v1/cF-cSAKYiQYGggsStGk_5V939O7AkZ99dIJfn5KQ5o
ZUtVLgCnp5F2Dps2m_ksdtM1THGsHFQX4TJyS7FuZ2rj_PXmU7/W1MT_quick_ref.pdf>
is a link to that file, in case it doesn't appear to you.
Unlike new photos added, new files don't appear when accessing the "NEW
FILE" heading in the digest email.
73,
Jonathan KC7FYS

3420. ATS3B in VX2

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-09 02:53:45 UTC
From: kc7fys
Topic: 3418 Message: 3420

It has been a bit of a disappointing wait for the Hanoi officials to get my license materials to VX2A in Saigon, but it looks like I will be on the air with my 3B most probably as VX2OC next week. I don't expect to be able to reach any in the States, but have been hearing a lot of JA, HL, HS, and UA calls in my pre-licensure QRL sessions from hotels and the beach.

My CSCE (the little ephemeral slip that is issued upon passage of exam elements, but superceded by the license itself) was required, and I had to have it dug up in the States--which took a long time. Anyway, I'll have an end-fed 50-foot wire with counterpoise, and probably be touching some JA ops next week from wherever we are.

The OC in this call, if it goes through as planned--is for Oscar Charles, the little rascal who's spending his 8th month on the air, as it were--travelling with us in Vietnam.

Is this at least the first ATS rig fired up in Vietnam?

Maybe that's something.

Jonathan KC7FYS/7J1AWL

3421. Re: ATS3A reduce output power to 1W

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-09 03:46:03 UTC
From: radio_kx0r
Topic: 3411 Message: 3421

--- In AT_Sprint@yahoogroups.com, "pks57" <peter.kohler@...> wrote:

Peter,

An easy but inefficient solution is to use a simple linear 3-terminal regulator, such as an LM317T. This will drop the voltage to whatever you choose, as long as the desired voltage is more than about 2.5 volts below the input voltage of your battery.

The current available is over an ampere. A heatsink should be used to limit the temperature of the device.

I have several homebrew bench supplies based on the LM317T and similar IC's, and they do a nice job. If you use a multiturn pot to adjust the voltage, you can set them very accurately.

Of course, a DC-DC converter would be more efficient. I like linear regulators because they don't generate any significant RF noise.

If you're in a hurry, the ATS rigs will run with a resistor in the supply line. This is one of the few rigs that can deal with a resistive supply. Try about 5 ohms for a starting point, and adjust it to get what you want with the key down. You may be surprised how well it works! I was...

I have a resistor in my lithium ion battery box to lower the voltage for tuning or other situations where full power isn't wanted.

I checked the keying, the note, the stability - works fine!
Incredible radio - very nice design!

72,

KX0R
Carey

> Dear Rob and Carey,
>
> thanks a lot for your input. I made some measurements and can confirm
> that it works as you suggested!
>
> I first tried to use 5 NiMH cells, however fully charged they're
> delivering 6.7V which resulted in an output power of about 1.2W (after
> ca. 40ft of RG174 into a dummy load). While discharging they were
> dropping below 6.0V which isn't good either.
>

> Using a stabilized source of 6.0V resulted in exactly 1W on 20 and
> 80m, and about 870mW on 40m (seems the 40m module is not optimally
tuned).
>
> So I'm going to find some decent DC-DC converter and will use one of
> the 11.1V or 14.8V LiPo packs I've got around here. So I'll be able
to
> avoid the voltage dropping below 6.0V too soon.
>
> Thanks again and best 72,
>
> Peter / HB9TVK
>

3422. Re: [AT_Sprint] Re: ATS3A reduce output power to 1W

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-09 05:58:43 UTC
From: Hank Greeb
Topic: 3411 Message: 3422

If you use an LM317 or similar, there are circuits which are more efficient - they use the device as some sort of switching circuit. They are >80% efficient, rather than just dropping the voltage via a "big regulated resistor" as is the case when you use them as a nominal 3 terminal I've used a LM723 plus pass transistor in such a circuit, but haven't experimented with the LM317 or similar.

73 de n8xx Hg

radio_kx0r wrote:
> --- In AT_Sprint@yahoogroups.com, "pks57" <peter.kohler@...> wrote:
>
> Peter,
>
> An easy but inefficient solution is to use a simple linear 3-terminal regulator, such as an LM317T. This will drop the voltage to whatever you choose, as long as the desired voltage is more than about 2.5 volts below the input voltage of your battery. <snip>

3423. do we hold a world record?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-09 09:08:56 UTC
From: gm0sim
Topic: 3423 Message: 3423

All in all how many ATS-* have been produced?. I was just reckoning that the ratio of the number of members in the group to the number of radios produced is probably the higest in the world showing the fantastic interest in these cute wee rigs and the loyal following they have. We can certainly beat the "big boys" hands down (ken-su-com) and probably our only closee competetion would be Elecraft.
I've now got the new fine point iron ready to be flashed up here and the kit is screaming to get opened and started (I've built Blue Rose SMD kits before and it mostly doesnt look to bad but I do admit that the miniscule DDS still scares me. Lets hope the solder wick works well!)

73s Ian

3424. NAQCC Sprint Tuesday night!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-09 23:16:40 UTC
From: NAQCC
Topic: 2905 Message: 3424

NAQCC Sprint Tuesday night!
This coming Tuesday evening will be the monthly NAQCC Sprint for August, 2008.

I will refer you to the proper URL:

http://www.arm-tek.net/~yoel/sprint200808.html

There you will find all the details as to time, frequencies and also a special prize (a classic book in Morse on CD donated by Chuck Adams K7QO).

This month's Special Award goes to the winner of a drawing among the following: The member in each division who makes the highest score and uses a vintage straight key.

This is a monthly event that caters to the CW veteran, the CW newcomer, straight key and bug fans. All are welcome to participate (this includes QRO); but you must use QRP power levels to compete for awards.

Come join us and have a real good time!

73 de Dave VA3RJ
NAQCC #0004

3425. Advice for keeping paint on boxes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-10 03:57:04 UTC
From: Dale Putnam
Topic: 3425 Message: 3425

I've put a number of pieces of equipment into the Altoids, small, med and large, and now having found the "gift" boxes of similar size, but with the same ability to lose paint in chips and scratches... have decided that something must be done. With all the wisdom and experience that abounds here, and some of you are very good at this, the question I pose it:
What can be applied to the boxes prior to installation, that will insure the paint already on the can will become a bit hardier, or chip and scratch resistant? I don't much like it when I can run a fingernail across it and inadvertently remove a strip of paint.
Or, is it simple, the price paid, gets me a can, now suck it up, and go custom paint it. I can do that too.
Suggestions?--... ...--Dale - WC7S in Wy

Get more from your digital life. Find out how.
http://www.windowslive.com/default.html?ocid=TXT_TAGLM_WL_Home2_082008

3426. My Radio Went Stone Dead

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-10 04:25:03 UTC
From: radio_kx0r
Topic: 3426 Message: 3426

Today I was sitting on a high mountain ridge calling CQ on 20 meters. I had tuned up an experimental vertical half-wave antenna in a tree, and everything seemed fine. The BLT match was almost perfect, and the temperature was about 80 degrees in the shade of the pines. It was a lovely place to operate, with the Plains and cities 1500 feet below.

Suddenly my ATS-3B went dead while I was sending. It was instantly silent with no warning, no smoke, and most important, no letter "E" on the display. Removing and restoring power had no effect. The radio was dead.

As I packed up my gear and hiked home through the woods, I wondered what could have happened to kill my rig. True, I was running 12 volts from 3 charged lithium-ion batteries, and yes, I was getting 5 watts out. But I did that for 4 hours in the Bumble Bee event, and the radio didn't die then. Maybe the stress of that event...

When I got home, I checked the battery, and it was totally dead - zero output. What? How? After I opened up the box containing the 3 cells, I found that 2 of the cells measured about 3.96 volts - this is OK. However, the third cell was almost dead. Since I used a protective PCB in the pack, the protection circuit had turned off the pack. I have no idea why the one cell went down, and I know I didn't charge it above spec - but at least the protection worked.

Be sure you use protection PCB's if you use lithium cells in homemade packs!!

I tried the radio with another battery, and it's perfect!

Too bad those lithium cells are held in there with silicone...

72,

Carey
KX0R

3427. Re: [AT_Sprint] Advice for keeping paint on boxes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-10 13:02:32 UTC
From: Ed - K9EW
Topic: 3425 Message: 3427

Hi Dale,

Not sure if this is what you're looking for, but I've used a clear plastic spray (Krylon) to protect a finish from abrasion.

Hope this helps.

73,
ed - k9ew
www.k9ew.us

3428. Re: [AT_Sprint] Advice for keeping paint on boxes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-10 13:18:57 UTC
From: john
Topic: 3425 Message: 3428

Prepping the surface (degreasing and scuffing with a scotchbrite pad)
helps, as does a quick coat of primer before the finish coat

I've had no paint loss on my dark hammertone finish... still looks pretty good
73
John K5MO

3429. Re: [AT_Sprint] Advice for keeping paint on boxes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-10 13:21:28 UTC
From: Fredric Lozo
Topic: 3425 Message: 3429

Glaze Coat, two part epoxy, is a good scratch resistant material. Thanks for the heads-up about the scratching problem.73, Fred AK5UFBL

--- On Sat, 8/9/08, Dale Putnam <daleputnam@...> wrote:
From: Dale Putnam <daleputnam@...>
Subject: [AT_Sprint] Advice for keeping paint on boxes
To: "AT Sprint" <at_sprint@yahoogroups.com>
Date: Saturday, August 9, 2008, 10:57 PM

I've put a number of pieces of equipment into the Altoids, small, med and large, and now having found the "gift" boxes of similar size, but with the same ability to lose paint in chips and scratches... have decided that something must be done. With all the wisdom and experience that abounds here, and some of you are very good at this, the question I pose it:

What can be applied to the boxes prior to installation, that will insure the paint already on the can will become a bit hardier, or chip and scratch resistant? I don't much like it when I can run a fingernail across it and inadvertently remove a strip of paint.

Or, is it simple, the price paid, gets me a can, now suck it up, and go custom paint it.

I can do that too.

Suggestions?
--... ...--
Dale - WC7S in Wy

Get more from your digital life. Find out how.

3430. RE: [AT_Sprint] Advice for keeping paint on boxes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-10 13:36:32 UTC
From: Dale Putnam
Topic: 3425 Message: 3430

Thanks Ed,
I'll try that, Krylon and I get along pretty well.
Say, are you the Ed that works on trunked systems too?--... ...--Dale - WC7S in Wy

To: AT_Sprint@yahoogroups.comFrom: k9ew57@...: Sun, 10 Aug 2008 08:02:32 -0500Subject: Re: [AT_Sprint] Advice for keeping paint on boxes

Hi Dale,Not sure if this is what you're looking for, but I've used a clearplastic spray (Krylon) to protect a finish from abrasion.Hope this helps.73,ed - k9ewwww.k9ew.us

_____
Reveal your inner athlete and share it with friends on Windows Live.
http://revealyourinnerathlete.windowslive.com?locale=en-us&ocid=TXT_TAGLM_WLYIA_whichathlete_us

3431. Re: [AT_Sprint] Advice for keeping paint on boxes

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-10 14:04:10 UTC
From: Ed - K9EW
Topic: 3425 Message: 3431

> Say, are you the Ed that works on trunked systems too?

'nope, must be another Ed. (Two Eds are better than one.)

73 - ed, k9ew

3432. Has anybody gotten the Jornada 720 to xmit psk with the ATS3B?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-10 21:26:11 UTC
From: Bill
Topic: 3432 Message: 3432

My ats3b works fine with two laptops, but so far,
no go with the Jornada. Same interface, the simple one
outlined in the manual. I tried adding 250ms delay to
transmit without any change.

Any help would be very much appreciated.
73,
Bill, ni5x.

3433. Re:My Radio Went Stone Dead

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-10 23:56:08 UTC
From: David Packard
Topic: 3426 Message: 3433

Whew, Carey, that was a close one! Knowing the way you run your ATS,
that was the first thing I thought of, too. Thanks for the heads-up.

72, Dave K1YHR.

3434. Re: [AT_Sprint] Has anybody gotten the Jornada 720 to xmit psk with the ATS3B?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-11 00:10:13 UTC
From: Vojtěch Bubník
Topic: 3432 Message: 3434

Hi Bill.

The output amplitude of Jornada 720 is too low to trigger the paddle input pins directly. You will need to build the slicer interface, look at the page 31 of the manual. Make sure that you install C1 of the slicer. The sound output of Jornada has not only low amplitude, but is also noisy. I spent about two weekends debugging communication with my Jornada 720. First I thought the interface does not work because the Manchester data stream is distorted by Jornada's equalizer. I even tried to develop an algorithm to predistort the Manchester signal to counter equalize the equalizer phase distortion. Incidentally I found out, that a 560pF capacitor to the ground fixes the problem and now the communication works. After you build the slicer, you could try to play with Jornada's equalizer to lower the rest of TX errors, if there are any left. If you connect Joranda's output to a scope, you will see short and bumps. The short (0.25ms) bumps shall have approximately the same amplitude as the long (0.5ms) ones. There shall be minimal phase shift between the long and short bumps.

I am currently developing some hardware and software extensions of ATS-3b. The first will be variable bandwidth filter. I am doing my extensions by Manhattan method on the bottom side of the board. I am using strips of gold plated connectors of PC memory modules and PCI boards. They have the same spacing as the SOIC chips. I am using magnet wire to interconnect the islands. This way you could fit slicer and much more on the bottom side.

I already fitted 74HC164 8-bit shift register on the bottom side and rewired 7segment display to it. Now I have 7 CPU pins liberated for other tasks. Two of the liberated pins will be used for I2C bus to drive D/A converter of variable bandwidth filter. I already have some electronic pots chips home, which I will be using to control earphone and digital interface amplitudes. The pot will be programmed separately for RX and sidetone, so this will also allow user control of sidetone volume.

73, Vojtech OK1IAK, AB2ZA

3435. Re: [AT_Sprint] Has anybody gotten the Jornada 720 to xmit psk with the ATS3B?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-11 00:41:46 UTC
From: bgriffin
Topic: 3432 Message: 3435

Vojte(ch Bubn?k wrote:
>
> Hi Bill.
>
> The output amplitude of Jornada 720 is too low to trigger the paddle
> input pins directly. You will need to build the slicer interface, look
> at the page 31 of the manual. Make sure that you install C1 of the
> slicer. The sound output of Jornada has not only low amplitude, but is
> also noisy. I spent about two weekends debugging communication with my
> Jornada 720. First I thought the interface does not work because the
> Manchester data stream is distorted by Jornada's equalizer. I even
> tried to develop an algorithm to predistort the Manchester signal to
> counter equalize the equalizer phase distortion. Incidentally I found
> out, that a 560pF capacitor to the ground fixes the problem and now
> the communication works. After you build the slicer, you could try to
> play with Jornada's equalizer to lower the rest of TX errors, if there
> are any left. If you connect Joranda's output to a scope, you will see
> short and bumps. The short (0.25ms) bumps shall have approximately the
> same amplitude as the long (0.5ms) ones. There shall be minimal phase
> shift between the long and short bumps.
>
> I am currently developing some hardware and software extensions of AT
>
> .

Hi Vojte(ch,

Thanks for that and all the rest you have done for us. This is a great
setup and
your software coupling to this radio is one of the main reasons I was
excited to
get it. I will build the other interface and try that.

Good luck with the other developments, as well.

73,
Bill, ni5x.

3436. Re: [AT_Sprint] Has anybody gotten the Jornada 720 to xmit psk with the ATS3B?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-11 11:49:45 UTC
From: bgriffin
Topic: 3432 Message: 3436

Vojte(ch Bubn?k wrote:
>
>
> I am currently developing some hardware and software extensions of
> ATS-3b. The first will be variable bandwidth filter. I am doing my
> extensions by Manhattan method on the bottom side of the board. I am
> using strips of gold plated connectors of PC memory modules and PCI
> boards. They have the same spacing as the SOIC chips. I am using
> magnet wire to interconnect the islands. This way you could fit slicer
> and much more on the bottom side.
>
> .
>
>
Vojtech,

I just read this part of your email more closely.

I wonder if we had the same idea simultaneously, or if you got it from me.

This is my personal page:
http://web.olp.net/bgriffin/tpw/
If you scroll to close to the bottom, you will see my implementation of
recycling of computer cards and memory modules. I also had this
published in QRP Quarterly in the tips section.

73,
Bill, ni5x.

3437. odd behavior on band modules for ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-11 17:41:22 UTC
From: John Shadle
Topic: 3437 Message: 3437

I have completed my ATS-3B and was trying to make sure it all worked as I drilled my Altoids tin. Something odd is happening, though, and I would love to get some troubleshooting advice for this issue.

My 40m and 80m band modules give the "4" and "8" when powered up. That's where the good times end, though.

My 15m, 17m, and 30m modules do nothing upon power up. My 20m module provides "8" on power up.

I was pretty sure that I didn't stuff any wrong parts, but maybe that is the problem. Any help would be appreciated--hopefully something that doesn't require me getting the microscope out and my soldering iron. Hi hi.

-john W4PAH

3438. Re: [AT_Sprint] odd behavior on band modules for ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-11 21:59:01 UTC
From: Stephen Wandling
Topic: 3437 Message: 3438
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

3439. Re: [AT_Sprint] odd behavior on band modules for ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-11 21:59:53 UTC
From: Stephen Wandling
Topic: 3437 Message: 3439
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

3440. Re: [AT_Sprint] odd behavior on band modules for ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-11 22:17:22 UTC
From: Michael Harnage
Topic: 3437 Message: 3440

Measure resistance between pin 3 and pin 5 of the band modules. Then compare with the chart at the top of page 21 of the manual. Let us know the results and we'll go from there.

Is it possible that you did some of the tests with fast power resets? That could account for not hearing anything. You should at least hear an 8 if nothing is inserted. When the power is disconnected it might be a good idea to hold the menu switch closed for a couple of seconds so that the caps are discharged. This will make the power on not think its a high current reset.

-mike/w1mt

--- On Mon, 8/11/08, John Shadle <shadle@...> wrote:

> I have completed my ATS-3B and was trying to make sure it
> all worked as
> I drilled my Altoids tin. Something odd is happening,
> though, and I
> would love to get some troubleshooting advice for this
> issue.
>
> My 40m and 80m band modules give the "4" and
> "8" when powered up. That's
> where the good times end, though.
>
> My 15m, 17m, and 30m modules do nothing upon power up. My
> 20m module
> provides "8" on power up.
>

3441. Re: [AT_Sprint] Has anybody gotten the Jornada 720 to xmit psk with the ATS3B?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-12 11:15:06 UTC
From: Vojtěch Bubník
Topic: 3432 Message: 3441

Hi Bill.

> I wonder if we had the same idea simultaneously, or if you got it from me.
>
> This is my personal page:
> http://web.olp.net/bgriffin/tpw/
> If you scroll to close to the bottom, you will see my implementation of
> recycling of computer cards and memory modules. I also had this
> published in QRP Quarterly in the tips section.

It is certainly not my original idea. I saw the article on eham.net. Maybe it was you who posted it there. I tried to
I am just pushing the method to the limits using SMD and magnet wire.

73, Vojtech

3442. Re: odd behavior on band modules for ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-12 17:57:04 UTC
From: Jim Fraser
Topic: 3437 Message: 3442

John,

I had a similar problem where my 30M module was recognized as a 40m module and my 40M module was seen as an 80m module. The other bands were OK. Upon investigation I found a very thin solder bridge across pins 4 and 5 of U7, the 5v and 3.5v lines. So perhaps you have a bridge somewhere as well. Did they ever work properly?

Jim K6JF

--- In AT_Sprint@yahoogroups.com, John Shadle <shadle@...> wrote:
>
> I have completed my ATS-3B and was trying to make sure it all worked as
> I drilled my Altoids tin. Something odd is happening, though, and I
> would love to get some troubleshooting advice for this issue.
>
> My 40m and 80m band modules give the "4" and "8" when powered up. That's
> where the good times end, though.
>
> My 15m, 17m, and 30m modules do nothing upon power up. My 20m module
> provides "8" on power up.
>
> I was pretty sure that I didn't stuff any wrong parts, but maybe that is
> the problem. Any help would be appreciated--hopefully something that
> doesn't require me getting the microscope out and my soldering iron. Hi hi.
>
> -john W4PAH
>

3443. Re: odd behavior on band modules for ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-13 01:39:02 UTC
From: shadle
Topic: 3437 Message: 3443

Michael,
I can't find the values on Page 21 that you speak of. I do see the table indicating which resistor I should put on each band board, but nothing else--and those values don't necessarily correlate with the values between pins 3 and 5 on the band boards.

Please let me know if I'm missing something or just plain confused. ;)

It's definitely not an issue of the power reset happening. I waited quite a while between power ups after changing band boards. Wish it was that easy...

Thanks.
-john W4PAH

--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:
>
> Measure resistance between pin 3 and pin 5 of the band modules. Then compare with the chart at the top of page 21 of the manual. Let us know the results and we'll go from there.
>
> Is it possible that you did some of the tests with fast power resets? That could account for not hearing anything. You should at least hear an 8 if nothing is inserted. When the power is disconnected it might be a good idea to hold the menu switch closed for a couple of seconds so that the caps are discharged. This will make the power on not think its a high current reset.
>
> -mike/w1mt
>
>
>
> --- On Mon, 8/11/08, John Shadle <shadle@...> wrote:
>
>
> > I have completed my ATS-3B and was trying to make sure it
> > all worked as
> > I drilled my Altoids tin. Something odd is happening,
> > though, and I
> > would love to get some troubleshooting advice for this
> > issue.
> >
> > My 40m and 80m band modules give the "4" and
> > "8" when powered up. That's
> > where the good times end, though.
> >

> > My 15m, 17m, and 30m modules do nothing upon power up. My
> > 20m module
> > provides "8" on power up.
> >
>

3444. Re: [AT_Sprint] Re: odd behavior on band modules for ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-13 03:34:04 UTC
From: Michael Harnage
Topic: 3437 Message: 3444

The resistance between pin 3 and pin 5 should match the table that has the values for RF1. (Example the 30M board should read about 10000 ohms). This is with the boards NOT plugged in. If you don't get the correct ohm reading then you either have a wrong/bad resistor or a short somewhere.

On the bottom of the board you can see the trace from one end of the resistor to pin 3. Pin 5 is ground.

Did it ever work properly?

-mike

--- On Wed, 8/13/08, shadle <shadle@...> wrote:

> From: shadle <shadle@...>
> Subject: [AT_Sprint] Re: odd behavior on band modules for ATS-3B
> To: AT_Sprint@yahoogroups.com
> Date: Wednesday, August 13, 2008, 2:39 AM
> Michael,
> I can't find the values on Page 21 that you speak of. I
> do see the
> table indicating which resistor I should put on each band
> board, but
> nothing else--and those values don't necessarily
> correlate with the
> values between pins 3 and 5 on the band boards.
>
> Please let me know if I'm missing something or just
> plain confused. ;)
>

3445. Re: odd behavior on band modules for ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-13 12:37:49 UTC
From: John Shadle
Topic: 3437 Message: 3445

I feel like a dope, now. ;) I the resistances according to the table (thanks, W1MT) and got wrong values. I then checked the soldering job, and noticed that I had missed a few joints. Bah! I'll get the iron fired up tonight and repair them. Hopefully that will do the trick!

Thanks for all your help!
-john W4PAH

3446. PocketDigi, FeldHell and the ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-13 21:20:53 UTC
From: full.some
Topic: 3446 Message: 3446

I recently heard some FeldHell transmissions on 40 meters and was unsuccessful in copying them with PocketDigi. Multipsk did decode the FeldHell signals.

Has anyone had success with FeldHell and the ATS3B? If so, how does one get PocketDigi to paint the screen with received characters?

3447. Re: [AT_Sprint] PocketDigi, FeldHell and the ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-13 22:29:02 UTC
From: Vojtěch Bubník
Topic: 3446 Message: 3447

Hi Full (hope this is your first name)

The Feld Hell reception is not implemented in PocketDigi and I am not sure whether the Feld Hell TX works with ATS-3b. It is basically fast CW, but I am not dead sure whether the manchester protocol is fast enough to support it.

Vojtech

> ------------ Původní zpráva ------------
> Od: full.some <full.some@...>
> Předmět: [AT_Sprint] PocketDigi, FeldHell and the ATS3B
> Datum: 13.8.2008 23:21:01
> --
> I recently heard some FeldHell transmissions on 40 meters and was
> unsuccessful in copying them with PocketDigi. Multipsk did decode the
> FeldHell signals.
>
> Has anyone had success with FeldHell and the ATS3B? If so, how does
> one get PocketDigi to paint the screen with received characters?
>
>
>
>

3448. Re: [AT_Sprint] PocketDigi, FeldHell and the ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-14 01:51:57 UTC
From: Full Some
Topic: 3446 Message: 3448

Thanks Vojtech

I will try using Multipsk for receive and PocketDigi for transmit the next time on FeldHell.

Thanks again.

Gary

--- On Wed, 8/13/08, Vojtěch Bubník <bubnikv@...> wrote:
From: Vojtěch Bubník <bubnikv@...>
Subject: Re: [AT_Sprint] PocketDigi, FeldHell and the ATS3B
To: AT_Sprint@yahoogroups.com
Date: Wednesday, August 13, 2008, 10:29 PM

Hi Full (hope this is your first name)

The Feld Hell reception is not implemented in PocketDigi and I am not sure whether the Feld Hell TX works with ATS-3b. It is basically fast CW, but I am not dead sure whether the manchester protocol is fast enough to support it.

Vojtech

> ------------ Původní zpráva ------------
> Od: full.some <full.some@...>
> Předmět: [AT_Sprint] PocketDigi, FeldHell and the ATS3B
> Datum: 13.8.2008 23:21:01
> --
> I recently heard some FeldHell transmissions on 40 meters and was
> unsuccessful in copying them with PocketDigi. Multipsk did decode the
> FeldHell signals.
>
> Has anyone had success with FeldHell and the ATS3B? If so, how does
> one get PocketDigi to paint the screen with received characters?
>
>
>
>

Yahoo! Groups Links

3449. Run for the Bacon, 8/17/2008, 6:00 pm

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-18 00:41:42 UTC
From: AT_Sprint@yahoogroups.com
Topic: 3449 Message: 3449

Reminder from: AT_Sprint Yahoo! Group
http://groups.yahoo.com/group/AT_Sprint/cal

Run for the Bacon
Sunday August 17, 2008
6:00 pm - 8:00 pm
(This event repeats every month on the third Sunday.)
Location: Your shack or anywhere

Notes:
This Sunday evening, the Flying Pigs Amateur Radio Club International will be holding its monthly Run For The Bacon. This is a friendly, two hour QRP CW Sprint, which is open to ALL radio amateurs, will last from 9:00 - 11:00PM EDT (0200-0400 UTC Monday).

You may work stations once per band on 160, 80, 40, 20, 15 or 10 Meters. Suggested starting frequencies are 1.812, 3.562, 7.044, 14.062, 21.062, and 28.062 MHz.

The exchange is RST, S/P/C (State, Province, Country) and Flying Pigs membership number. If you're not a member of the Flying Pigs, and would like to be; then please cli

All Rights Reserved
Copyright ? 2008
Yahoo! Inc.
http://www.yahoo.com

Privacy Policy:
http://privacy.yahoo.com/privacy/us

Terms of Service:
http://docs.yahoo.com/info/terms/

3450. ATS-3b with rotary encoder and other experiments

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-18 03:18:23 UTC
From: Vojtěch Bubník
Topic: 3450 Message: 3450

Hi gang.

I did some more enhancements of my ATS-3b. I am using an extreme Manhattan construction with SMD parts, magnet wire and pieces of computer PCI and SIMM PCB connectors. Here are the pictures of top and bottom side of the ATS-3b main board. Click on the picture to zoom it.

http://www.kufr.cz/~ok1iak/temp/ATS3b-Manhattan-Artwork-in-SMD/

I currently added a cheapo rotary encoder for main tuning and microcontroller regulated voltage regulator from 0 to VCC for biasing of varactors in variable bandwidth IF filter. Tune Down button is currently used to switch the rotary encoder between tuning and bandwidth control functions.

I added shift register between microcontroller and display to free some of the microcontroller pins. Now I still have 3 pins free, but they will be used soon. The D/A converter is an I2C part and other I2C parts may be controlled at the same pins as the first D/A.

The rotary encoder works as a charm. The part I used is Mouser's 858-EN11-VNB1AQ15 for $1.34, 20 pulses per revolution with detent. I removed the detent and checking for all up/down edges of the A/B signals I am able to detect 20x4=80! positions per revolution. It really works well, I am surprised and happy about it. The encoder rotates smoothly, is cheap, small and still seems to be robust. The encoder will fit for sure on the side of the Altoids tin next to the RCA connector. The encoder is so thin, that I believe it will even fit between the PCB board and the front side of the tin.

The varactor bias circuit is a bit complex. The D/A converter operates at 3.5V. Its output drives an MCP601 op-amp at 3.5V, which drives two transistors powered by ATS main power supply. This way one gets as high varactor bias as possible to open the filter wide. Still the power consumption of this circuit is about 0.6mA.

Now I will be experimenting with better matching of the crystal filter to get nicer filter shape at wider bandwidths. I will also reconfigure the audio amplifier as low pass to allow for SSB reception. Then I will add a separate switchable CW audio filter and digital pot for volume control. The volume will be controlled by the rotary encoder also.

73, Vojtech OK1IAK

3451. odd behavior in ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-18 03:37:24 UTC
From: shadle
Topic: 3451 Message: 3451

Hi (again),
After solving my soldering problems since I last wrote, I have the board in the tin and am trying to adjust band modules for peak power.

My issue is not when I enter straight key mode on power up (i.e., hold down the dash paddle while powering up). That works great. I'm getting 6.7V into my Elecraft DL1 (1.8W) from an 8.0V battery, which is okay.

The issue is when I plug in the power and am trying to actually "use the radio". Pressing the MENU button does nothing--but when I touch either the dash or dit paddle I get the following output:

S N D P A (and S n d P A on the screen)

Now when I press the paddle or MENU button (or any other button for that matter) nothing happens.

Any ideas on this one?

Thanks.
-john W4PAH

3452. Re: ATS-3b with rotary encoder and other experiments

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-18 08:49:18 UTC
From: Harry, OE6GC
Topic: 3450 Message: 3452

Hi Vojtech,
is it possible to use the rotary encoder without software
changing at the ATS 3 (not ATS3B) too? Could you provide further info
please?
Tnx, 73, Harry, OE6GC
http://members.inode.at/harald.gosch/Projects/ATS-
3__AT_sprint_III/ats-3__at_sprint_iii.html

--- In AT_Sprint@...m, Vojtìch Bubník <bubnikv@...> wrote:
>
> Hi gang.
>
> I did some more enhancements of my ATS-3b. ....>
>
> I currently added a cheapo rotary encoder for main tuning ....

3453. Re: [AT_Sprint] odd behavior in ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-18 12:35:35 UTC
From: Michael Harnage
Topic: 3451 Message: 3453

John,

Not enough information to pinpoint a specific area. Here is what I would do:

1. Take the board out of the tin.

2. Test without paddle, to make sure that all buttons work as expected.

3. Test with paddle.

4. If it works, then check the mechanicals of the tin/board relationship for some kind of short.

If any of the above steps fails then report the results back here and someone will try to help.

Btw, the N is likely an M, right?

-mike/w1mt

--- On Mon, 8/18/08, shadle <shadle@...> wrote:

> Hi (again),
> After solving my soldering problems since I last wrote, I
> have the
> board in the tin and am trying to adjust band modules for
> peak power.
>
> My issue is not when I enter straight key mode on power up
> (i.e., hold
> down the dash paddle while powering up). That works great.
> I'm getting
> 6.7V into my Elecraft DL1 (1.8W) from an 8.0V battery,
> which is okay.
>
> The issue is when I plug in the power and am trying to
> actually "use
> the radio". Pressing the MENU button does nothing--but
> when I touch
> either the dash or dit paddle I get the following output:
>
> S N D P A (and S n d P A on the screen)
>
> Now when I press the paddle or MENU button (or any other
> button for
> that matter) nothing happens.
>

> Any ideas on this one?
>
> Thanks.
> -john W4PAH

3454. Re: [AT_Sprint] Re: ATS-3b with rotary encoder and other experiments

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-18 12:51:45 UTC
From: Vojtěch Bubník
Topic: 3450 Message: 3454

> is it possible to use the rotary encoder without software
> changing at the ATS 3 (not ATS3B) too?

Hi Harry.

My extensions of ATS-3b certainly include both hardware and software. Your ATS3 has all microcontroller PINs used already. To connect the rotary encoder, one needs either to multiplex existing pins to free two of them for the rotary encoder (that is what I did and I had to change software too), or you need to simulate up/down buttons with the rotary encoder.

It is possible to connect some of the rotary encoders with detent directly to the up/down buttons. They have both contacts open in detent position and one signals goes down first if rotating from detent position in one direction and the other goes down first if rotating from detent position in the other direction. But if you slightly press the shaft out of detent for one second, ATS3 will initiate fast tuning, which is an unwanted effect. The mechanical encoders with detent have usually low number of steps, about max 25. If you remove the detent and modify the firmware, the decoder will provide 4x more positions.

One could program a small microcontroller to read the rotary encoders and simulate up/down buttons. Putting the new chip between the rotary encoder and up/down buttons of ATS3 will not require any change in ATS3 firmware and will work reliably. I thought about this possibility first and I even found some example on the internet. But now I went another direction with my ATS3b.

73, Vojtech

3455. Re: odd behavior in ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-19 02:36:38 UTC
From: shadle
Topic: 3451 Message: 3455

Michael Harnage <w1mt@...> wrote:
>
> John,
>
> Not enough information to pinpoint a specific area. Here is what I
would do:
>
> 1. Take the board out of the tin.

Done.

> 2. Test without paddle, to make sure that all buttons work as expected.
> 3. Test with paddle.

Here is where it got weird. I went back to page 22 of the manual and decided to do the Check Out and Calibration steps again. I removed L3 and found no shorts between DC in and the 5 and 3.5 V regulators. Plugged in power. Heard the "8" (and saw it on the LED). Voltage at TP1 was 3.97 V. Voltage across PA gates was as expected.

Now is where the odd stuff comes in...

I plug in the paddles and immediately get the SndPA on the LED display (and SMDPAX in the headphones). After this point, neither pressing any of the four buttons nor tapping the paddles results in any noise or action with the radio.

I decide to see what happens if I leave the paddles out. I remove the paddles and try to plug the power back in. It appears that the voltage protection has tripped, so I press the four buttons to reset the protection and then re-apply power. I get "8" audibly and visually. I then press the MENU button and get SMDPAX in succession.

I did this last step again and found out that I can hold the MENU button down and will be able to access various functions by releasing the MENU button when I hear/see the menu item I'm interested in; however, after I choose the menu item (e.g., "d") then I can only exit the menu and after that, no joy.

This is very frustrating. Any suggestions would be greatly appreciated. I'm sure it's something simple, but I really am at a loss at this point.

> 4. If it works, then check the mechanicals of the tin/board
relationship for some kind of short.

I think this is limited to the board itself and not the tin/board
mechanicals. No short there that I can tell.

> If any of the above steps fails then report the results back here
and someone will try to help.

Hope so. I can't figure this one out. I'm sure it's something simple.

> Btw, the N is likely an M, right?

Yes. It "says" M but "writes" N. That's what I meant to type. :)

Thanks for all your help, Mike (and whoever can figure this mystery
out and help me get on the air with the 3B).

-john W4PAH

> -mike/w1mt
>
>
> --- On Mon, 8/18/08, shadle <shadle@...> wrote:
>
> > Hi (again),
> > After solving my soldering problems since I last wrote, I
> > have the
> > board in the tin and am trying to adjust band modules for
> > peak power.
> >
> > My issue is not when I enter straight key mode on power up
> > (i.e., hold
> > down the dash paddle while powering up). That works great.
> > I'm getting
> > 6.7V into my Elecraft DL1 (1.8W) from an 8.0V battery,
> > which is okay.
> >
> > The issue is when I plug in the power and am trying to
> > actually "use
> > the radio". Pressing the MENU button does nothing--but
> > when I touch
> > either the dash or dit paddle I get the following output:
> >
> > S N D P A (and S n d P A on the screen)
> >
> > Now when I press the paddle or MENU button (or any other
> > button for
> > that matter) nothing happens.
> >
> > Any ideas on this one?
> >
> > Thanks.
> > -john W4PAH
>

3456. Finally got psk transmit with jornada 720 and ats3b.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-19 03:32:06 UTC
From: Bill
Topic: 3456 Message: 3456

Had to use an audio amp between the output of the
Jornada and the simple interface to the ats3b. I built the
more complicated interface with the op-amp, but it isn't
working yet. I either have a bad op-amp chip or (more likely)
I have bad solder joints. I am using a surface mount AD8692 that
I got as a free sample.

The audio amp I used that was successful uses TDA1517P chip with
fixed gain. So far I have only transmitted into a dummy load.
I will post to the group again when I have a successful QSO with it.

73 to all,
Bill, ni5x.

3457. Re: odd behavior in ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-19 11:33:40 UTC
From: jaakko330
Topic: 3451 Message: 3457

--- In AT_Sprint@yahoogroups.com, "shadle" <shadle@...> wrote:

> This is very frustrating. Any suggestions would be greatly
> appreciated. I'm sure it's something simple, but I really am at a
> loss at this point.

I would check with a multimeter that there is no extra connection
between inputs and outputs of MPS430 that could result in this kind of
behaviour. P1.0 and P2.0 could be shorted under the chip for example
or something similar.

73, Jaakko OH7BF/F5VGL

3458. KD1JV return

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-19 21:56:51 UTC
From: Kurt Savegnago
Topic: 3451 Message: 3458

Any idea when Steve is going to return? I saw the post on his webpage.

He fixed my 40 meter DSW-II for me and worked great on the dummy load.

Took it out and tuned my PAC-12 with the variable coil to 40 meters with an SX-600 meter and an FT-817ND to a nice low SWR. Went to the deck, brought over the DSW-II plugged in the antenna,phones and key applied the power.

I heard a "dit, dit" then nothing. Looked over at the antenna and the tap came off the coil! The DSW-II is now dead. I think the power was set to the max 5 watts and the power supply was a 12V gel cell.

Was wondering when Steve was getting back as he does repair work on these units according to the Small Wonders site.

He previously fixed the unit as there was a micro piece of solder shorting one of the 2N7000 transistors. It was trying to transmit in the receive mode. Once he brushed it off, the radio worked nominally.

I really tested it out on the dummy load when I got it back from him and it worked absolutely beautifully. I want to send it back one more time to see if he can bring it back to life. Next time, I'll turn the power trimmer to low while on the dummy to help prevent this from occurring again. Plus double check the antenna first. This is probably going to be the most expensive DSW-II 40 meters out there! :-)

Kurt KC9LDH

3459. SMT resistor question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-19 23:51:44 UTC
From: n8ewy
Topic: 3459 Message: 3459

This is my first post to the group. I just started working on my ATS-3B and I already have Shot one of the small(0603 size) 47k (labled 471) resistors into SMT never-never land. Of course I couldn't find it.

I recently ordered a couple 500 piece smt grab bags from Dan's Small Parts. I found 3 or 4 471's in it. They are just a hair larger than the ones in my kit. The difference is negligable. It fits on the board just fine. By that I mean the contacts on each end of the resistor fit to the pads on the board almost as well as the original.

Is this resistor going to work OK on the board in place of the loast one?

Dohn Smythe N8EWY
n8ewy@...

3460. RE: [AT_Sprint] SMT resistor question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-20 00:19:05 UTC
From: Rob May
Topic: 3459 Message: 3460

It will work fine Dohn. I've done the same thing, except I can go down to the local Fry's and pick up the 1206 size. As long as you can get solder on the pads and on the ends of the resistor you're fine. In a pinch you could even bend the leads of a regular resistor and solder it on to make it work in an emergency (or while you're waiting for the right part).
Rob
NV5E

To: AT_Sprint@yahoogroups.com
From: n8ewy@...
Date: Tue, 19 Aug 2008 23:51:44 +0000
Subject: [AT_Sprint] SMT resistor question

This is my first post to the group. I just started working on my ATS-

3B and I already have Shot one of the small(0603 size) 47k (labled 471)

resistors into SMT never-never land. Of course I couldn't find it.

I recently ordered a couple 500 piece smt grab bags from Dan's Small

Parts. I found 3 or 4 471's in it. They are just a hair larger than

the ones in my kit. The difference is negligable. It fits on the

board just fine. By that I mean the contacts on each end of the

resistor fit to the pads on the board almost as well as the original.

Is this resistor going to work OK on the board in place of the loast

one?

Dohn Smythe N8EWY

n8ewy@...

See what people are saying about Windows Live. Check out featured posts.
http://www.windowslive.com/connect?ocid=TXT_TAGLM_WL_connect2_082008

3461. Re: [AT_Sprint] SMT resistor question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-20 00:23:39 UTC
From: john
Topic: 3459 Message: 3461

In resistance, size doesn't matter ! :-) Seriously, all else being
equal, it should work fine. It's probably a metal film 5%. Most 5% measure
closer to 1% tolerance anyway these days.

John K5MO

At 07:51 PM 8/19/2008, you wrote:
>This is my first post to the group. I just started working on my ATS-
>3B and I already have Shot one of the small(0603 size) 47k (labled 471)
>resistors into SMT never-never land. Of course I couldn't find it.
>
>I recently ordered a couple 500 piece smt grab bags from Dan's Small
>Parts. I found 3 or 4 471's in it. They are just a hair larger than
>the ones in my kit. The difference is negligable. It fits on the
>board just fine. By that I mean the contacts on each end of the
>resistor fit to the pads on the board almost as well as the original.
>
>Is this resistor going to work OK on the board in place of the loast
>one?
>
>Dohn Smythe N8EWY
>n8ewy@...
>
>
>----------
>
>Yahoo! Groups Links
>
>
>

3462. Re: SMT resistor question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-20 00:27:43 UTC
From: Bill
Topic: 3459 Message: 3462

-
> This is my first post to the group. I just started working on my ATS-
> 3B and I already have Shot one of the small(0603 size) 47k (labled 471)

Just one more caveat: 471 marking would mean a 470 ohm resistor,
not 47k.

Bill, ni5x.

3463. RE: [AT_Sprint] Re: SMT resistor question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-20 00:37:49 UTC
From: Rob May
Topic: 3459 Message: 3463

Bill is right, 47K will be 473, not 471. Just remember, first 2 numbers followed by the number of 0's.
Rob
NV5E

To: AT_Sprint@yahoogroups.com
From: bgriffin@...
Date: Wed, 20 Aug 2008 00:27:43 +0000
Subject: [AT_Sprint] Re: SMT resistor question

-

> This is my first post to the group. I just started working on my ATS-

> 3B and I already have Shot one of the small(0603 size) 47k (labled 471)

Just one more caveat: 471 marking would mean a 470 ohm resistor,

not 47k.

Bill, ni5x.

_____
Be the filmmaker you always wanted to be—learn how to burn a DVD with Windows®.
http://clk.atdmt.com/MRT/go/108588797/direct/01/

3464. Re: SMT resistor question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-20 01:02:21 UTC
From: n8ewy
Topic: 3459 Message: 3464

You guys right. It was 470 Ohms. Thanks alot for the assit. I doubt if this will be my last question regarding my build. So far I'm loving working with these smt parts. It's not my very first experience with them, but it's the most complex. I'm taking my time and experimenting with diff methods of building. So far a pair of tweezers and a couple toothpicks are working best for me.

I'm open to any sugestions since most everyone here has completed one of these great rigs. I am considering combing it with an FCC-1. I have one built which I built in combination with an FCC-2. I sent the board off to have the large (small sized) processor soldered down. I admit I was intimidated by it.

I ordered a second FCC-1. I'm still thinking about shipping it off to have the fine precessor placed. If I do, I may send the ATS as well to have U7, the DDS chip, soldered.

If there is someone here on the list that would be interested in the job, PLEASE, by all means let me know. If anyone has any suggestions on how I might do this myself, I am open to that as well. I just don't want to spend weeks troubleshooting my rig. I am still quite an amateur at this and I am a good solderer. However, being an amateur at building means I am not real experienced with trouble shooting. I have built an RF probe and I'm learning to use it, but I have alot to learn about theory. I'm motivated.

Once again, if there is someone on the list willing to take on these couple of soldering jobs, I would be willing to chat about it. I really want this thing to work good.

Thanx for the bandwidth

sincerely and 73,

Dohn
N8EWY

--- In AT_Sprint@yahoogroups.com, Rob May <roblitespeed@...> wrote:
>
>
> Bill is right, 47K will be 473, not 471. Just remember, first 2 numbers followed by the number of 0's.
> Rob
> NV5E
>
>
> To: AT_Sprint@yahoogroups.com

> From: bgriffin@...
> Date: Wed, 20 Aug 2008 00:27:43 +0000
> Subject: [AT_Sprint] Re: SMT resistor question
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
> -
>
> > This is my first post to the group. I just started working on my
ATS-
>
> > 3B and I already have Shot one of the small(0603 size) 47k
(labled 471)
>
>
>
> Just one more caveat: 471 marking would mean a 470 ohm resistor,
>
> not 47k.
>
>
>
> Bill, ni5x.
>
>
>
>
>
>
>
>
>
>
>

>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
> _____
> Be the filmmaker you always wanted to be□learn how to burn a DVD
with Windows®.
> http://clk.atdmt.com/MRT/go/108588797/direct/01/
>

3465. RE: [AT_Sprint] Re: SMT resistor question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-20 01:48:09 UTC
From: Rob May
Topic: 3459 Message: 3465

Dohn,
Don't be intimidated by the small pitch of the DDS chip. You can tack solder it at opposite corners and then do the rest of the pins. Let the solder bridge. Go back over it with some braid and it will look perfect. I've used that trick before but haven't had to on the ATS's I've built. The magnifying lamp and tiny, tiny solder is your friend.
Rob
NV5E
ATS-3
ATS-3A (sold)
ATS-3A (built for another ham)
ATS-3B (sold)

To: AT_Sprint@yahoogroups.com
From: n8ewy@...
Date: Wed, 20 Aug 2008 01:02:21 +0000
Subject: [AT_Sprint] Re: SMT resistor question

You guys right. It was 470 Ohms. Thanks alot for the assit. I

doubt if this will be my last question regarding my build. So far

I'm loving working with these smt parts. It's not my very first

experience with them, but it's the most complex. I'm taking my time

and experimenting with diff methods of building. So far a pair of

tweezers and a couple toothpicks are working best for me.

I'm open to any sugestions since most everyone here has completed one

of these great rigs. I am considering combing it with an FCC-1. I

have one built which I built in combination with an FCC-2. I sent

the board off to have the large (small sized) processor soldered

down. I admit I was intimidated by it.

I ordered a second FCC-1. I'm still thinking about shipping it off

to have the fine precessor placed. If I do, I may send the ATS as

well to have U7, the DDS chip, soldered.

If there is someone here on the list that would be interested in the

job, PLEASE, by all means let me know. If anyone has any suggestions

on how I might do this myself, I am open to that as well. I just don't want to spend weeks troubleshooting my rig. I am still quite an amateur at this and I am a good solderer. However, being an amateur at building means I am not real experienced with trouble shooting. I have built an RF probe and I'm learning to use it, but I have alot to learn about theory. I'm motivated.

Once again, if there is someone on the list willing to take on these couple of soldering jobs, I would be willing to chat about it. I really want this thing to work good.

Thanx for the bandwidth

sincerely and 73,

Dohn

N8EWY

--- In AT_Sprint@yahoogroups.com, Rob May <roblitespeed@...> wrote:

>

>

> Bill is right, 47K will be 473, not 471. Just remember, first 2 numbers followed by the number of 0's.

> Rob

> NV5E

>

>

> To: AT_Sprint@yahoogroups.com

> From: bgriffin@...

> Date: Wed, 20 Aug 2008 00:27:43 +0000

> Subject: [AT_Sprint] Re: SMT resistor question

>

>

>

>

>

>

>

>

>

>

>

>

>

>

>

>

>

>

>

>

> -

>

> > This is my first post to the group. I just started working on my

ATS-

>

> > 3B and I already have Shot one of the small(0603 size) 47k

(labled 471)

>

>

>

> Just one more caveat: 471 marking would mean a 470 ohm resistor,

>

> not 47k.

>

>

>

> Bill, ni5x.

>

>

>

>

>

>

>

>

>

>

>

>

>

>

>

>

>

>

>

>

>

>

>

>

>

>

>

>

>

>

>

>

> _____

> Be the filmmaker you always wanted to be—learn how to burn a DVD

with Windows®.

> http://clk.atdmt.com/MRT/go/108588797/direct/01/

>

_____
Get thousands of games on your PC, your mobile phone, and the web with Windows®.
http://clk.atdmt.com/MRT/go/108588800/direct/01/

3466. RE: [AT_Sprint] Re: SMT resistor question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-20 03:39:14 UTC
From: Mark Brueggemann
Topic: 3459 Message: 3466

--- Rob May <roblitespeed@...> wrote:

> The magnifying lamp and tiny, tiny solder is your friend.

I find that a somewhat larger iron tip with thermal mass and some
liquid rosin flux makes soldering the finest of leads pretty easy.

Mark K5LXP
Albuquerque, NM

3467. RE: [AT_Sprint] Re: SMT resistor question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-20 05:17:51 UTC
From: Rob May
Topic: 3459 Message: 3467

I totally agree with you Mark. I do not use a superfine tip. I use the tip that came with the soldering iron. I like to keep it on the hot side and work fast. For SM, I use solder that is .015 or .010. It's very easy to get too much solder on a joint with SM components.
73,
Rob
NV5E

To: AT_Sprint@yahoogroups.com
From: qrq_cw@...
Date: Tue, 19 Aug 2008 20:39:14 -0700
Subject: RE: [AT_Sprint] Re: SMT resistor question

--- Rob May <roblitespeed@...> wrote:

> The magnifying lamp and tiny, tiny solder is your friend.

I find that a somewhat larger iron tip with thermal mass and some

liquid rosin flux makes soldering the finest of leads pretty easy.

Mark K5LXP

Albuquerque, NM

_____
Talk to your Yahoo! Friends via Windows Live Messenger. Find out how.
http://www.windowslive.com/explore/messenger?ocid=TXT_TAGLM_WL_messenger_yahoo_082008

3468. Re: [AT_Sprint] SMT resistor question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-20 11:06:49 UTC
From: Vojtěch Bubník
Topic: 3459 Message: 3468

Hi Dohn.

One advantage to work with SMD is that it makes the junk box small and easy to obtain. Just keep couple of computer cards on hand. It is easy to find a missing resistor on the junk box boards using magnifying glass and good light source. No need to buy set of parts at all. To remove two leg SMD part from the board I actually add solder to both ends so I may heat both ends at once with a soldering iron. After the solder melts I push the part away and it will stick to the tip with surface tension of the solder. Then just shake the part off the tip, pick it with tweezers and remove the surplus solder with clean soldering iron. Finally it is wise to measure the part with a meter. If one works fast and does not use excessive force during desoldering, most probably the part will be OK. But if you push the part before the solder melts, or heat just one side of the part, you may peel off one of the contacts.

73, Vojtech OK1IAK, AB2ZA

3469. Re: SMT resistor question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-20 13:39:56 UTC
From: n8ewy
Topic: 3459 Message: 3469

Vojtek,
It sounds like a flux pen is in order. I think I have one in my shack. Do you guys have a preference for solder braid? Is there something/some kind that is superior to the others? What I have, I got from DigiKey. It works OK at best. It takes a short period of time to get the solder wet and then to wick.

Would it help to swipe the joint with the flux pen first?

Dohn N8EWY
--- In AT_Sprint@yahoogroups.com, Vojtìch Bubník <bubnikv@...> wrote:
>
> Hi Dohn.
>
> One advantage to work with SMD is that it makes the junk box small and easy to obtain. Just keep couple of computer cards on hand. It is easy to find a missing resistor on the junk box boards using magnifying glass and good light source. No need to buy set of parts at all. To remove two leg SMD part from the board I actually add solder to both ends so I may heat both ends at once with a soldering iron. After the solder melts I push the part away and it will stick to the tip with surface tension of the solder. Then just shake the part off the tip, pick it with tweezers and remove the surplus solder with clean soldering iron. Finally it is wise to measure the part with a meter. If one works fast and does not use excessive force during desoldering, most probably the part will be OK. But if you push the part before the solder melts, or heat just one side of the part, you may peel off one of the contacts.
>
> 73, Vojtech OK1IAK, AB2ZA
>

3470. Re: [AT_Sprint] Re: SMT resistor question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-20 14:50:03 UTC
From: Vojtěch Bubník
Topic: 3459 Message: 3470

> It sounds like a flux pen is in order. I think I have one in my shack. Do you
> guys have a preference for solder braid? Is there something/some kind that is
> superior to the others? What I have, I got from DigiKey. It works OK at best.
> It takes a short period of time to get the solder wet and then to wick.
>
> Would it help to swipe the joint with the flux pen first?

I am using a solid rosin. If there is no rosin on the solder joint I want to free off solder, I first put the wick on the rosin, heat the wick with soldering iron and let it suck the rosin. Then I place the wick over the joint and warm the wick with soldering iron. The liquid flux will work as well, maybe better. There are wicks sold, which are already filled with flux, but the flux-less works well for me. I don't think the wick type is important as far as it is not corroded.

Vojtech

3471. Re: odd behavior in ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-21 19:44:57 UTC
From: shadle
Topic: 3451 Message: 3471

Here is the resolution to the problem posted a few days ago. To recap, I was having strange behavior with the MENU functions starting when I used my paddles. I also found that when I torqued he board just a bit I was able to use the MENU button.

After some troubleshooting help from W1MT as well as KD1JV I found out that I must've had a not so great connection on one of the resistors near PB1. Here is Steve's reply about getting the MENU button function from keying the paddles:

"Check the connections to the pull up resistor on that button. Torquing the board likely makes it connect, which makes the button work. When it looses connection, the input is floating, which is likely why the keyer makes it trigger sometimes, due to leakage."

Interesting stuff!

Can't wait to make my first contact with the rig. Now to finish calibration...

Take care.
-john W4PAH

3472. schematic needed for ZM-2

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-22 14:59:23 UTC
From: Dale Putnam
Topic: 3472 Message: 3472

Here's the deal, I need a schematic and parts list for the ZM-2 ATU,
thought I would ask the awesome folk habiting the lists,
PDF, or scanned, or however, thank you very much.--... ...--Dale - WC7S in Wy

_____
Talk to your Yahoo! Friends via Windows Live Messenger. Find out how.
http://www.windowslive.com/explore/messenger?ocid=TXT_TAGLM_WL_messenger_yahoo_082008

3473. FW: schematic needed for ZM-2

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-22 15:00:42 UTC
From: Dale Putnam
Topic: 3473 Message: 3473

Here's the deal, I need a schematic and parts list for the ZM-2 ATU,
thought I would ask the awesome folk habiting the lists,
PDF, or scanned, or however, thank you very much.

--... ...--
Dale - WC7S in Wy

_____
See what people are saying about Windows Live. Check out featured posts.
http://www.windowslive.com/connect?ocid=TXT_TAGLM_WL_connect2_082008

3474. Green trimmers in kit???

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-23 21:56:27 UTC
From: n8ewy
Topic: 3474 Message: 3474

There are 9 green trimmers in my parts for the ATS I am building. What I don't get is if you mount them according to their design, the adjust screw inside the cap is on the bottem and can longer be adjusted.

Do you modify the leads or am I missing something?

73
Dohn Smythe N8EWY
n8ewy@comcast.com

3475. Re: [AT_Sprint] Green trimmers in kit???

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-23 22:17:42 UTC
From: Vojtěch Bubník
Topic: 3474 Message: 3475

Hi Dohn.

It is a known issue. One of ATS-3b batches contains those trimmers. I remember Steve ran out of the correct ones and he was unable to obtain the same type. His recommendation is to solder them to the other side of the board, tune the filter, remove the trimmers and solder them to the bottom side of the filter board.

Vojtech

3476. RE: [AT_Sprint] Green trimmers in kit???

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-23 22:29:32 UTC
From: Dohn
Topic: 3474 Message: 3476

Hi Vojtech

I know I saw this addressed at some web page, but I can□t remember which it was. It had pics.

I still cannot picture any way to mount this cap and have the adjustment side (bottom) of the cap facing up for adjustment. Not without bending the leads of the cap 180 degrees. Then the flat side could face the right direction and the adjustment screw would be accessible. It seems like It would be hooked up correctly as far as polarity goes. (Flat side facing the right direction)

Dohn
N8EWY

From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com] On Behalf Of Vojtech Bubník
Sent: Saturday, August 23, 2008 6:18 PM
To: AT_Sprint@yahoogroups.com
Subject: Re: [AT_Sprint] Green trimmers in kit???

Hi Dohn.

It is a known issue. One of ATS-3b batches contains those trimmers. I remember Steve ran out of the correct ones and he was unable to obtain the same type. His recommendation is to solder them to the other side of the board, tune the filter, remove the trimmers and solder them to the bottom side of the filter board.

Vojtech

3477. RE: [AT_Sprint] Green trimmers in kit???

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-23 22:46:07 UTC
From: Michael Harnage
Topic: 3474 Message: 3477

That's the simplest solution!

-mike/w1mt

--- On Sat, 8/23/08, Dohn <n8ewy@...> wrote:

I still cannot picture any way to mount
this cap and have the adjustment side (bottom) of the cap facing up for
adjustment. Not without bending the
leads of the cap 180 degrees. Then the
flat side could face the right direction and the adjustment screw would be accessible. It seems like It
would be hooked up correctly as far as polarity goes. (Flat side facing the
right direction)

3478. Re: Green trimmers in kit???

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-23 22:49:55 UTC
From: n8ewy
Topic: 3474 Message: 3478

But will it work? I can't see a reason why not.

Can you?

Dohn

--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:
>
> That's the simplest solution!
>
> -mike/w1mt
>
> --- On Sat, 8/23/08, Dohn <n8ewy@...> wrote:
>
>
>
> I still cannot picture any way to mount
> this cap and have the adjustment side (bottom) of the cap facing up
for
> adjustment. Not without bending the
> leads of the cap 180 degrees. Then the
> flat side could face the right direction and the adjustment screw
would be accessible. It seems like It
> would be hooked up correctly as far as polarity goes. (Flat side
facing the
> right direction)
>
>
>

3479. securing the toroids

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-24 18:59:17 UTC
From: Alan Shapiro
Topic: 3479 Message: 3479

I'd like to secure the toroids down to the PCBs. What kind of cement
is preferred?

Thanks,
Alan, NM5S

3480. Re: [AT_Sprint] securing the toroids

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-24 19:33:48 UTC
From: John A. Evans - N0HJ
Topic: 3479 Message: 3480

Ready Mix ;)

72 - john - n0hj

Alan Shapiro wrote:
>
> I'd like to secure the toroids down to the PCBs. What kind of cement
> is preferred?
>
> Thanks,
> Alan, NM5S
>
> __

3481. Re: [AT_Sprint] securing the toroids

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-24 19:49:40 UTC
From: John A. Evans - N0HJ
Topic: 3479 Message: 3481

Some have used small dabs of hot glue where it was needed, though I've not felt any glue is needed on the modules.

72 - john - n0hj

3482. Re: [AT_Sprint] securing the toroids

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-24 23:03:46 UTC
From: Ed - K9EW
Topic: 3479 Message: 3482

I think it was Wes Hayward, W7ZOI, who ran some experiments and found that the clear, electronic grade, RTV was the best adhesive he could find. I also use hot-melt glue without a problem. If I remember correctly, he wrote a report about it and you can find it on his website. Do a Google to find it.

73,
ed - k9ew
www.k9ew.us

On Sun, Aug 24, 2008 at 1:59 PM, Alan Shapiro <nm5s@...> wrote:
> I'd like to secure the toroids down to the PCBs. What kind of cement
> is preferred?
>
> Thanks,
> Alan, NM5S
>
>

3483. Re: [AT_Sprint] securing the toroids

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-25 02:57:05 UTC
From: Michael Harnage
Topic: 3479 Message: 3483

I've never felt the need to secure the toroids but think double sided tape or thin double sided foam might be fine. It would also be easily removable if the need arose. Than flexible goop that is used to hang light things on walls would be easy to use as well.

-mike/w1mt

--- On Sun, 8/24/08, Alan Shapiro <nm5s@...> wrote:

> I'd like to secure the toroids down to the PCBs. What
> kind of cement
> is preferred?

3484. Re: securing the toroids

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-25 05:09:42 UTC
From: radio_kx0r
Topic: 3479 Message: 3484

--- In AT_Sprint@yahoogroups.com, "Alan Shapiro" <nm5s@...> wrote:
>
> I'd like to secure the toroids down to the PCBs. What kind of cement
> is preferred?
>
> Thanks,
> Alan, NM5S
>

Alan,

I did Q tests with a set of toroids and showed that there is very little difference in performance between inductors coated with nothing, hot glue, silicone, Duco cement, and 5-minute epoxy.

For the ATS-3 I like hot glue, because an inductor can be easily removed using hot air. The glues are too permanent, especially when you understand that whether you get 3.5 or 5 watts from your rig on some band may depend on how well you adjust the turns or those two toroids in the transmit filter.

Whatever glue you use, use a minimum amount on just one side.

The little filter modules seem less delicate once the toroids are glued down. The turns will definitely get moved around and detuned if you change bands often in a field or outdoor location. You don't want your toroids pulling loose from the delicate board. You should be able to replace a toroid if it gets damaged, and I think your choice of glue should be made with that in mind.

Whatever you do, don't rush and glue any of your inductors until you've had time to adjust the turns and optimize them. My papers relating to adjustment of the filter modules are posted in the Files section of this site. Whether you want maximum safe power or best efficiency, you'll be very pleased if you patiently adjust your output filters. Some improvement in receive performance also is possible - your starting values may not be quite right on every band.

There are a lot of posts on these subjects, plus other good stuff you can find, if you use the Search feature for our site.

For mounting a medium or high-power inductor, forget hot glue - it will melt when the inductor gets warm. I like silicone (RTV, etc.) because it absorbs shock, can take some heat, and tends to keep the toroid where it belongs. It's really a pain to remove, especially if you go heavy with it.

72,

Carey
KX0R

3485. Re: [AT_Sprint] Green trimmers in kit???

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-25 13:14:25 UTC
From: Bill Noyce
Topic: 3474 Message: 3485

Which ATS? If it's the ATS-3B, the filter boards should have a hole
where each trimmer is mounted, so you can reach the adjustment screw.
The bottom-adjust caps are ideal because you can adjust it while the
cap and filter board are mounted normally.
-- Bill, AB1AV

On Sat, Aug 23, 2008 at 5:56 PM, n8ewy <n8ewy@...> wrote:
> There are 9 green trimmers in my parts for the ATS I am building. What
> I don't get is if you mount them according to their design, the adjust
> screw inside the cap is on the bottem and can longer be adjusted.
>
> Do you modify the leads or am I missing something?
>
> 73
> Dohn Smythe N8EWY
> n8ewy@...
>
>

3486. ATS3B Jornada 720 and Op-amp interface for PSK

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-26 02:12:16 UTC
From: Bill
Topic: 3486 Message: 3486

Some on here asked me to post when I got the Jornada 720 to work psk with the ATS3B. I now have it working using the op-amp interface as listed in the manual. It is the same schematic, I just used a different op amp that I had on hand. I used a AD8692 that I got as a free sample from Analog Devices. I built it surface mount, manhattan/ni5x style. There is a photo under my call sign in the photo section. It is very ugly, but works. It is made to fit inside a small altoids tin and run from 3 volts.

feel free to ask me about it, just don't expect expert answers.
73,
Bill, ni5x.

3487. Sidetone volume.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-26 08:43:03 UTC
From: kc7fys
Topic: 3487 Message: 3487

I recently had a really good time on a family trip in Vietnam, operating my ATS3B from the balcony of our beach bungalow--into a modest dipole. Worked lots of countries and naturally--a whole load of JA stations for about 5 evenings running on 40M. No other bands yielded anything to speak of, however. Great fun. Photos and description here:
<http://www.flickr.com/photos/jonathancharles/sets/72157606886612479/>

One issue for me was sidetone volume. I use a little Radio Shack powered speaker about the size of a Big Mac. It's the biggest piece of equipment in the tupperware pitcher that contains my station, besides the 10-AA cells, but I just can't deal with headphones. A lot of the problem is my own tinnitus, but the gain-riding is tedious, too. An in-line volume control works, but leaves me turning it up and down between hearing my sidetone and the receiver itself. I'm a sort of sound reinforcement appliance operator, too, and if the ATS3 were a synthesizer or any other instrument with such a wide dynamic range, I'd run it through a compressor with a really fast attack and decay to hard-limit the sidetone. There'd be pumping and artifacts, but at least the sidetone would be tamed. I found myself, when calling CQ on a frequency in beacon mode, having to quickly turn up the volume between iterations. The sidetone became too much of an attention-getter from other tourists!

I did a search of the yahoogroup and didn't notice a previous conversation. Is this something I might be able to perform a mod for? That seems like a better idea than trying to deal with compression, etc. This is a small thing in the big picture, though. What an impressive rig out in the field. Several Vietnamese hams and marine radio technicians gave it a thorough looking-over. XV2A, Mr. Nguyen, was looking for some inexpensive gear to encourage new hams to get started, and although the 3B isn't in the "cheap" category, I was able to suggest several single-band crystal-controlled QRP kits that could easily be built from parts available there.

Anyway, the sidetone thing. Any ideas?
Jonathan KC7FYS/XV2OC

3488. KL7R's R11 mod

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-26 10:28:42 UTC
From: kc7fys
Topic: 3488 Message: 3488

Does adding 150k to R11 still apply to the ATS3B?
KC7FYS

3489. Re: [AT_Sprint] Sidetone volume.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-26 11:20:45 UTC
From: Vojtěch Bubník
Topic: 3487 Message: 3489

> Anyway, the sidetone thing. Any ideas?

Change R12 to 1M or higher.

Or put 330k or lower resistor parallel to C21. Lower value will decrease sidetone more. You could stack the additional resistor on top of C21.

I am currently working on a fancy digital volume control. There will be just one digital pot, but will be reprogrammed between RX and sidetone, so one would have a possibility to control both independently. But this mod is much more extensive than the simple resistor addition.

Vojtech

3490. Re: [AT_Sprint] KL7R's R11 mod

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-26 11:22:01 UTC
From: Vojtěch Bubník
Topic: 3488 Message: 3490

> Does adding 150k to R11 still apply to the ATS3B?
No, that would change time constant of AVC.

Vojtech

3491. Re: Green trimmers in kit???

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-26 15:39:09 UTC
From: sm0xg
Topic: 3474 Message: 3491

--- In AT_Sprint@yahoogroups.com, "Bill Noyce" <WBNoyce@...> wrote:
>
> Which ATS? If it's the ATS-3B, the filter boards should have a hole
> where each trimmer is mounted, so you can reach the adjustment screw.
> The bottom-adjust caps are ideal because you can adjust it while the
> cap and filter board are mounted normally.
> -- Bill, AB1AV
>>> >
>Bill, The green trimmers are easily mounted so you can reach the
adjustment screw though the hole if you prolong the two soldering
tags 'backwards' by soldering on cut-off legs from other components.
Then cut off the unused original soldering tags

73, Karl SM0XG

3492. Re: Sidetone volume.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-26 22:30:19 UTC
From: kc7fys
Topic: 3487 Message: 3492

R12 brings it down nicely.
Thanks,
Jonathan

--- In AT_Sprint@yahoogroups.com, Vojtìch Bubník <bubnikv@...> wrote:
>
> > Anyway, the sidetone thing. Any ideas?
>
> Change R12 to 1M or higher.

3493. Re: KL7R's R11 mod

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-28 04:14:55 UTC
From: gerardvk4tgl
Topic: 3488 Message: 3493

--- In AT_Sprint@yahoogroups.com, "kc7fys" <kc7fys@...> wrote:
>
> Does adding 150k to R11 still apply to the ATS3B?
> KC7FYS
>
Yep. Except it is now R12 (in the ATS3b). Increasing the resistance
of R12 successfully lowered the side tone volume in mine.

Good Luck

Gerard VK4TGL

3494. initial check out: OK on the digital display 8, but not the CW 8

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-30 19:53:00 UTC
From: Alan Shapiro
Topic: 3494 Message: 3494

My initial check out running off a 9V transistor radio battery that reads about 8V.

5V and 3.5V Regulators OK.
Display 8 on power up, but just hiss in the headphones. Also no tone with dits and dahs.
TP1 voltage is 3V, not the 4
The instructions say to check voltage on the PA gates, Q6 to Q8. Is that right or should that read Q7-9?

Looking for some help.

Thanks!
Alan, NM5S

3495. RE: [AT_Sprint] Sidetone volume.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-31 08:25:53 UTC
From: Dohn
Topic: 3487 Message: 3495

Any approx. ETA on that vol control?????????

Dohn
N8EWY

_____

From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com] On Behalf Of Vojtech Bubník
Sent: Tuesday, August 26, 2008 7:21 AM
To: AT_Sprint@yahoogroups.com
Subject: Re: [AT_Sprint] Sidetone volume.

> Anyway, the sidetone thing. Any ideas?

Change R12 to 1M or higher.

Or put 330k or lower resistor parallel to C21. Lower value will decrease sidetone more. You could stack the additional resistor on top of C21.

I am currently working on a fancy digital volume control. There will be just one digital pot, but will be reprogrammed between RX and sidetone, so one would have a possibility to control both independently. But this mod is much more extensive than the simple resistor addition.

Vojtech

3496. RE: [AT_Sprint] Sidetone volume.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-31 11:57:34 UTC
From: Vojtěch Bubník
Topic: 3487 Message: 3496

Hi Dohn.

> Any approx. ETA on that vol control?????????

I am implementing hardware extensions first with rudimentary firmware changes just to test the newly added hardware. I currently have the variable IF bandwidth control and volume control in place. After I have all the new HW working sufficiently, I will start polishing the firmware. With the rotary encoder in addition to the four existing buttons one could make the user interface more friendly. But it will be much more effort than it seems to. And my son is using a lot of my free time previously spent by homebrewing.

I reconfigured audio amp from Sallen-Key sharp CW band pass filter to a simple voltage follower configuration with amplification control by putting digitally controlled resistor at feedback of the audio amp. It works, but passes all the wide band noise generated by the product detector SA612 and all following stages into your earphones. I certainly do not like it. I will most probably add a two section op amp configured as SSB low pass and CW band pass filters and I will add a firmware controlled digital switch to bypass the CW filter.

I tried to receive SSB on 40m with the variable bandwidth filter, but it did not work well. The variable IF filter opens up. The BFO is set above the IF pass band, so at audio frequency the situation is inverted and the variable IF filter opens down. I believe Steve's design decision to put the IF below BFO frequency was driven by circuit simplicity. Putting the IF above BFO frequency requires additional pulling inductance. I believe I will try to pull the BFO below IF one day, which will make the SSB band correct at all bands but 40M. On 40M the side band may be flipped by injecting mirror frequency into the mixer, which is a simple firmware change.

I also fitted one jack socket between the brass spacer and earphone socket on the ATS-3b board. It will be used for digital control, but it is not connected anywhere right now. I will post pictures later.

Hi David.

> Your on-going development work is wonderful and I am following it with great interest.
> I have hopes that KD1JV will issue another kit incorporating your final modifications.

I cannot talk for Steve. I believe there is enough room for the additional chips on the existing board, but it would require 4 layer PCB with smaller vias to fit it all to the same format. The board will be much more expensive and the kit more difficult to build and debug.

Again, I cannot talk for Steve, but I could imagine if there is something to be brought to his kits, it may be the rotary encoder and / or volume control, but most probably not the variable bandwidth stuff or exact PSK31 envelope which is on my todo list.

73, Vojtech

3497. RE: [AT_Sprint] Sidetone volume.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-31 12:20:08 UTC
From: Vojtěch Bubník
Topic: 3487 Message: 3497

> I tried to receive SSB on 40m with the variable bandwidth filter, but it did not
> work well. The variable IF filter opens up. The BFO is set above the IF pass
> band, so at audio frequency the situation is inverted and the variable IF filter
> opens down. I believe Steve's design decision to put the IF below BFO frequency
> was driven by circuit simplicity. Putting the IF above BFO frequency requires
> additional pulling inductance.

One could model single quartz by series resonant circuit (piezo effect of the quartz) with a parallel capacitance (electrodes). A ladder filter modeled with just the series resonant circuit will be symmetric in log frequency. If one simulates ladder filter with real parts and added parallel capacitances of the crystal electrodes, the filter response will have deep notch on bottom side and will have poor response on the upper side. It is usually not a big problem and one uses the deep notch to improve sideband suppression. Therefore it is advanteous to put the BFO frequency below the IF filter.

73, Vojtech OK1IAK, AB2ZA

3498. Re: initial check out: OK on the digital display 8, but not the CW 8

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-31 18:37:33 UTC
From: Markus
Topic: 3494 Message: 3498

Alan,

Are your 8V measured under load or is it the open circuit voltage of your battery? Let your ATS-3B measure and display the actual voltage. 40mA is quite a load for a 9V battery, so maybe what's left of your 8V is less than you would expect. Just a little hint to make sure you are not chasing a battery problem.

73, Markus

3499. Filter board Mod question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-08-31 19:29:38 UTC
From: n8ewy
Topic: 3499 Message: 3499

In my manual, regarding the filter boards, it states that Toroid LF4 should be an 18uH molded inductor (BRN/GRY/BLK). That is what was sent as inventory.

HOWEVER ..... in looking at suggestions from others (KX0R for instance) some have changed the molded inductor to a T37-2 with 75 turns of #30 wire. Have others done this as well for better tuning? I was wondering if I should dig up another toroid and do this as well?

Anybody have thoughts on this??????

Dohn N8EWY

3500. WATERPROOF THE ATS-3 series

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-01 20:56:44 UTC
From: n4eo
Topic: 3500 Message: 3500

Gang,

Not sure if this has surfaced before (no pun intended).

Unmodified, the OTTER (waterproof) BOX model 1000 (priced under $12.00) is such a snug fit for Altoids tin ATS-3 series with the phono RF output connector in place that there is no rattle, with the box sealed (gasket type seal). It is ever so slightly overdimension for a naked Altoids tin.

I operate some at Oahu beaches and this is a nice barrier box in this environment (when breezes with sea spray and light rain develop outside my Kelty tent). Kayak operation under construction!

SEE www.otterbox.com (no financial interest).

SEE operating site at www.campmokuleia.org (no financial interest).

All the 70's,
Jerry N4EO/KH6
Ft Shafter, Oahu

3501. Re: [AT_Sprint] WATERPROOF THE ATS-3 series

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-01 21:39:09 UTC
From: WA0ITP
Topic: 3500 Message: 3501

Great enclosure Jerry, Thanx for posting it.

I've put my ATS3 in a zip lock bag with small holes, taped over the leads at the holes, and gotten by ok in rain. If I need more protection than that, I'm not going out, hi.. I'd be a whole lot more cautious near sallt water tho..

I love this radio stuff !
72, 73 Terry, WA?ITP
www.wa0dx.org/wa0itp
www.4sqrp.com
www.hams4u.com
www.qrpspots.com

----- Original Message -----
From: "n4eo" <brownj106@...>
To: <AT_Sprint@yahoogroups.com>
Sent: Monday, September 01, 2008 3:56 PM
Subject: [AT_Sprint] WATERPROOF THE ATS-3 series

> Gang,
>
> Not sure if this has surfaced before (no pun intended).
>
> Unmodified, the OTTER (waterproof) BOX model 1000 (priced under
> $12.00) is such a snug fit for Altoids tin ATS-3 series with the
> phono RF output connector in place that there is no rattle, with the
> box sealed (gasket type seal). It is ever so slightly overdimension
> for a naked Altoids tin.
>
> I operate some at Oahu beaches and this is a nice barrier box in
> this environment (when breezes with sea spray and light rain develop
> outside my Kelty tent). Kayak operation under construction!
>
> SEE www.otterbox.com (no financial interest).
>
> SEE operating site at www.campmokuleia.org (no financial interest).
>
> All the 70's,
> Jerry N4EO/KH6
> Ft Shafter, Oahu
>
>
> ------------------------------------
>
> Yahoo! Groups Links

>
>
>

No virus found in this incoming message.
Checked by AVG - http://www.avg.com
Version: 8.0.169 / Virus Database: 270.6.14/1645 - Release Date: 9/1/2008 7:19
AM

3502. Re: initial check out: OK on the digital display 8, but not the CW 8

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-02 01:46:06 UTC
From: Alan Shapiro
Topic: 3494 Message: 3502

Thanks for your responses, especially to Tom Williams, K9AC. I found a bad connection in the sidetone audio path at C51. I'll borrow a frequency counter and continue. Exciting!

3503. Re: WATERPROOF THE ATS-3 series

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-03 02:23:04 UTC
From: ve3wmb
Topic: 3500 Message: 3503

Jerry :

Checkout my pics in the photos section of this group (last page).
I use the Pelican equivalent to the Otter 1000 and
my ATS3A is in an American Morse AA-1 enclosure.

I have Pelican cases for most of the rigs that I use for portable
operating, as they are extra insurance when carrying the rigs around
in a pack or even the trunk of a car.

Cheers,

Michael VE3WMB/VA2NB

--- In AT_Sprint@yahoogroups.com, "n4eo" <brownj106@...> wrote:
>
> Gang,
>
> Not sure if this has surfaced before (no pun intended).
>
> Unmodified, the OTTER (waterproof) BOX model 1000 (priced under
> $12.00) is such a snug fit for Altoids tin ATS-3 series with the
> phono RF output connector in place that there is no rattle, with the
> box sealed (gasket type seal). It is ever so slightly overdimension
> for a naked Altoids tin.
>
> I operate some at Oahu beaches and this is a nice barrier box in
> this environment (when breezes with sea spray and light rain develop
> outside my Kelty tent). Kayak operation under construction!
>
> SEE www.otterbox.com (no financial interest).
>
> SEE operating site at www.campmokuleia.org (no financial interest).
>
> All the 70's,
> Jerry N4EO/KH6
> Ft Shafter, Oahu
>

3504. P3 Touch Keyer inside ATS IIIB

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-03 14:30:40 UTC
From: kr5l
Topic: 3504 Message: 3504

Hi,

I am going to post 3 pictures of my ATS 3B with a P3 touch keyer installed inside. I used a Whitman's Chocolate Sampler tin -- it is thicker than an Altoids tin and gave me enough room to install an AC plug from a wallwart. The setup works just great.

All The Best and 73's,

Jerry Henshaw
KR5L

3505. Re: [AT_Sprint] P3 Touch Keyer inside ATS IIIB

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-03 16:42:44 UTC
From: WA0ITP
Topic: 3504 Message: 3505

Very Nice Jerry,

How did you attach the paddles?

I love this radio stuff !
72, 73 Terry, WA?ITP
www.wa0dx.org/wa0itp
www.4sqrp.com
www.hams4u.com
www.qrpspots.com

----- Original Message -----
From: "kr5l" <jerryhenshaw@...>
To: <AT_Sprint@yahoogroups.com>
Sent: Wednesday, September 03, 2008 9:30 AM
Subject: [AT_Sprint] P3 Touch Keyer inside ATS IIIB

> Hi,
>
> I am going to post 3 pictures of my ATS 3B with a P3 touch keyer
> installed inside. I used a Whitman's Chocolate Sampler tin -- it is
> thicker than an Altoids tin and gave me enough room to install an AC
> plug from a wallwart. The setup works just great.
>
> All The Best and 73's,
>
> Jerry Henshaw
> KR5L
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>

No virus found in this incoming message.
Checked by AVG - http://www.avg.com
Version: 8.0.169 / Virus Database: 270.6.15/1649 - Release Date: 9/3/2008 7:15
AM

3506. [Fwd: KD1JV Wins the QST Cover Plaque!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-03 18:33:46 UTC
From: Hank Greeb
Topic: 3506 Message: 3506

-------- Original Message --------
Subject: [QRP-L] KD1JV Wins the QST Cover Plaque!
Date: Wed, 03 Sep 2008 10:51:40 -0400
From: <dave@...>
To:

Just saw on the ARRL web site that KD1JV won the QST Cover Plaque Award for
August:

http://www.arrl.org/?artid=8444

Way to go, Steve!

73 de Dave NK0E

3507. Re: P3 Touch Keyer inside ATS IIIB

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-03 21:11:28 UTC
From: kc7fys
Topic: 3504 Message: 3507

It looks great, Jerry.
Where is the touch-keyer PCB? Mine had to reside stuck to the top of
the paddle jack. I don't see yours. Nice to have paddles close to the
ATS3 onboard buttons, too.
Jonathan KC7FYS

--- In AT_Sprint@yahoogroups.com, "kr5l" <jerryhenshaw@...> wrote:
>
> Hi,
>
> I am going to post 3 pictures of my ATS 3B with a P3 touch keyer
> installed inside.
> Jerry Henshaw
> KR5L
>

3508. QRP on the air from KH6 (Oahu, Hawaii)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-03 22:01:39 UTC
From: n4eo
Topic: 3508 Message: 3508

QRP'ers,

We plan to be QRP'ing on 20 meter cw later today and tomorrow (3 and 4 Sep) from the beaches of eastern Oahu.

Site of planned operation...see www.bellowsafs.com

More to follow here on QRP-L after we gain access to our beach house.

Operation later this month (18 and 19 Sep) planned from beaches of NW Oahu...see www.campmokuleia.org

72,

Jerry (OM) N4EO/KH6
Angie (XYL) KH6EO

3509. Whitman/Sucrets

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-03 22:10:03 UTC
From: J. Haynes
Topic: 3509 Message: 3509

Are the samplers still available? Also I noticed a metal box of Sucrets at an Iowan WalMart last year, but haven't ever seen one since. The Sucret box looked deeper. Do they exist?
Jonathan 7J1AWL

3510. Re: P3 Touch Keyer inside ATS IIIB

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-03 22:43:07 UTC
From: kr5l
Topic: 3504 Message: 3510

--- In AT_Sprint@yahoogroups.com, "WA0ITP" <wa0itp@...> wrote:
>Terry,

I took a wallwart and cut around the AC plug (the wallwart plugs are
not polarized and therefore are the same size which looks better than
a standard AC plug such as is on an extension cord). I mounted the
paddles to the case with two 440 screws and nuts. There is absolutely
NO PLAY in the paddles -- rock solid. I used double stick foam tape
to mount the P3 touch keyer to the ATS PC board. It is a very, very,
tight fit but it worked!!!

All The Best,

Jerry
KR5L

> Very Nice Jerry,
>
> How did you attach the paddles?
> ----------
> I love this radio stuff !
> 72, 73 Terry, WAØITP
> www.wa0dx.org/wa0itp
> www.4sqrp.com
> www.hams4u.com
> www.qrpspots.com
>
>
> ----- Original Message -----
> From: "kr5l" <jerryhenshaw@...>
> To: <AT_Sprint@yahoogroups.com>
> Sent: Wednesday, September 03, 2008 9:30 AM
> Subject: [AT_Sprint] P3 Touch Keyer inside ATS IIIB
>
>
> > Hi,
> >
> > I am going to post 3 pictures of my ATS 3B with a P3 touch keyer
> > installed inside. I used a Whitman's Chocolate Sampler tin -- it is
> > thicker than an Altoids tin and gave me enough room to install an AC
> > plug from a wallwart. The setup works just great.
> >
> > All The Best and 73's,
> >
> > Jerry Henshaw
> > KR5L

> >
> >
> > ------------------------------------
> >
> > Yahoo! Groups Links
> >
> >
> >
>
>
>

>
>
>
> No virus found in this incoming message.
> Checked by AVG - http://www.avg.com
> Version: 8.0.169 / Virus Database: 270.6.15/1649 - Release Date:
9/3/2008 7:15
> AM
>

3511. Re: [AT_Sprint] Re: P3 Touch Keyer inside ATS IIIB

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-03 22:45:45 UTC
From: WA0ITP
Topic: 3504 Message: 3511

Very innovative, and looks great..
Thanx for the info.

I love this radio stuff !
72, 73 Terry, WA?ITP
www.wa0dx.org/wa0itp
www.4sqrp.com
www.hams4u.com
www.qrpspots.com

----- Original Message -----
From: "kr5l" <jerryhenshaw@...>
To: <AT_Sprint@yahoogroups.com>
Sent: Wednesday, September 03, 2008 5:43 PM
Subject: [AT_Sprint] Re: P3 Touch Keyer inside ATS IIIB

--- In AT_Sprint@yahoogroups.com, "WA0ITP" <wa0itp@...> wrote:
>Terry,

I took a wallwart and cut around the AC plug (the wallwart plugs are
not polarized and therefore are the same size which looks better than
a standard AC plug such as is on an extension cord). I mounted the
paddles to the case with two 440 screws and nuts. There is absolutely
NO PLAY in the paddles -- rock solid. I used double stick foam tape
to mount the P3 touch keyer to the ATS PC board. It is a very, very,
tight fit but it worked!!!

All The Best,

Jerry
KR5L

> Very Nice Jerry,
>
> How did you attach the paddles?
> ---
> I love this radio stuff !
> 72, 73 Terry, WA?ITP
> www.wa0dx.org/wa0itp
> www.4sqrp.com
> www.hams4u.com
> www.qrpspots.com
>
>
> ----- Original Message -----
> From: "kr5l" <jerryhenshaw@...>

> To: <AT_Sprint@yahoogroups.com>
> Sent: Wednesday, September 03, 2008 9:30 AM
> Subject: [AT_Sprint] P3 Touch Keyer inside ATS IIIB
>
>
> > Hi,
> >
> > I am going to post 3 pictures of my ATS 3B with a P3 touch keyer
> > installed inside. I used a Whitman's Chocolate Sampler tin -- it is
> > thicker than an Altoids tin and gave me enough room to install an AC
> > plug from a wallwart. The setup works just great.
> >
> > All The Best and 73's,
> >
> > Jerry Henshaw
> > KR5L
> >
> >
> > ------------------------------------
> >
> > Yahoo! Groups Links
> >
> >
> >
>
>
>

>
>
>
> No virus found in this incoming message.
> Checked by AVG - http://www.avg.com
> Version: 8.0.169 / Virus Database: 270.6.15/1649 - Release Date:
9/3/2008 7:15
> AM
>

Yahoo! Groups Links

No virus found in this incoming message.
Checked by AVG - http://www.avg.com
Version: 8.0.169 / Virus Database: 270.6.15/1649 - Release Date: 9/3/2008 7:15
AM

3512. Re: P3 Touch Keyer inside ATS IIIB

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-03 22:46:28 UTC
From: kr5l
Topic: 3504 Message: 3512

--- In AT_Sprint@yahoogroups.com, "kc7fys" <kc7fys@...> wrote:
>
Jonathan,

I am pasting my reply to Terry's question -----

I took a wallwart and cut around the AC plug (the wallwart plugs are
not polarized and therefore are the same size which looks better than
a standard AC plug such as is on an extension cord). I mounted the
paddles to the case with two 440 screws and nuts. There is absolutely
NO PLAY in the paddles -- rock solid. I used double stick foam tape
to mount the P3 touch keyer to the ATS PC board. It is a very, very,
tight fit but it worked!!!

All The Best,

Jerry
KR5L

PS--- I also have mounted a P3 Touch Keyer inside a wallwart with a
switch and 9Volt Battery for a standalone keyer. It is posted on the
CW Touch Keyer website if you want to see it.

> It looks great, Jerry.
> Where is the touch-keyer PCB? Mine had to reside stuck to the top of
> the paddle jack. I don't see yours. Nice to have paddles close to the
> ATS3 onboard buttons, too.
> Jonathan KC7FYS
>
>
> --- In AT_Sprint@yahoogroups.com, "kr5l" <jerryhenshaw@> wrote:
> >
> > Hi,
> >
> > I am going to post 3 pictures of my ATS 3B with a P3 touch keyer
> > installed inside.
> > Jerry Henshaw
> > KR5L
> >
>

3513. Re: Whitman/Sucrets

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-04 02:32:36 UTC
From: Jim Fraser
Topic: 3509 Message: 3513

I haven't seen any Whitman Samplers, but I have not really been looking for candy too much. I did pick up a can of Sucrets earlier this year and put a N0SS Noise Generator into it. It is slighly deeper than an Altoids tin, but it is not as wide.

Sucrets: 3.25 x 2.5 x 1
Altoids: 3.9 x 2.5 x .9

Jim K6JF

3514. Part needed

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-04 15:07:30 UTC
From: asfco@nycap.rr.com
Topic: 3514 Message: 3514

The sidetone volume on my ATS 3A is killing me...As has been previously suggested I would like to replace the R11 resistor with something around 800K.
I have called several sources and they all want a minimum order..
So
Anyone have a type 0805 5% 800K smd they would like to part with?
I know I could use a regular resistor but I want things to match..
Thanks
73
John W2GB

3515. Re: [AT_Sprint] Part needed

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-05 19:00:18 UTC
From: Mark Brueggemann
Topic: 3514 Message: 3515

--- asfco@... wrote:

> I would like to replace the R11 resistor
...
> I have called several sources and they all want a minimum order..

Several comments:

Set yourself up for SMD by getting some of the assortment kits.
Collect scrap PCB's that have SMD parts. A PC or other piece of
consumer gear will have hundreds of useable parts.
Use a leaded part. Bend the leads appropriately and fit it to
convenient pads on the PCB.

I put an assortment of parts in the mail today. Let us know what
value works out for you.

Mark K5LXP
Albuquerque, NM

3516. DDS reference oscillator 50MHz

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-06 00:58:59 UTC
From: Alan Shapiro
Topic: 3516 Message: 3516

Hi again,

I'm checking out my recently completed ATS-3b.
I see 60 MHz on the input to the DDS chip, and 50 MHz on the output.
I am looking for 10 MHz of course.
I do see 0.87V across R16 on the "CF" mode.

The other out of ordinary thing I see is 3.1 V on R19 rather than the "about 4 V" stated in the manual. I do have the 5V and 3.5V OK on the DDS chip.

Any suggestions please.

Alan, NM5S

3517. Wilderness Radio Operation with ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-06 03:25:50 UTC
From: radio_kx0r
Topic: 3517 Message: 3517

Over the Labor Day Weekend I fulfilled a lifetime dream of operating a ham radio station from a remote wilderness location on a backpack trip. While I've operated QRP portable from numerous tent campsites in the woods and mountains here in Colorado, somehow I'd never managed to take an HF station on an overnight backpack trip into a real wilderness area. It finally happened.

My trip was about 9 miles from the trailhead, into the Mount Zirkel Wilderness northwest of Walden, CO. Even though it was a major weekend, I had several square miles of stunning scenery, and three subalpine lakes full of large trout all to myself for more than two days!

The station weighed about 3 pounds and consisted of the ATS-3B, 5 band modules in a small metal box, a 3-cell lithium-ion 12V 2.2AH pack, a homemade ALT-type L-network tuner, Palm paddles, small in-ear hones, a 57-foot inverted-L #22 antenna wire, a 16-foot #22 counterpoise, a 100-foot 3/32" dacron rope, a 60-foot 3/32" dacron rope, and a small organizer pack for protection. In addition I took an extra spinning reel spool loaded with braided line for putting up the antenna, plus two large steel nuts for use as casting weights. These items had a dual purpose - putting up the third rope for the "bear bag" food storage.

The sloping INV-L antenna was about 33 feet high in a tree at its high end, and it sloped down to about 18 feet up in another tree. Then it came down vertically to the tent. The 16 feet of counterpoise was laid out on the ground away from the antenna. There was no feedline. I've used similar setups before. While Eznec shows it to be inferior to a center-fed dipole at 30 feet, it's less to carry and simpler to erect.

Operating the rig was the fulfillment of a dream I've had for almost 50 years. My first contact was Friday after dark on 40M with KB0QZ in Centralia, MO. He was 579-589, but he only gave me 529. Nevertheless, we had a nice ragchew lasting more than 30 minutes; Marty was running 30W with an OCF dipole, and he sounded great up there at 10,000 feet.

Saturday afternoon I tuned up on 20M and called CQ a few times, with no luck. The I heard DL5RBR working a contest, and I called him just for kicks. He came right back and we had a complete exchange lasting a few seconds - at least the rig was getting out on 20M. Later that night I tuned the antenna up on 30M, and had a wonderful, solid Q with NO8D/P, who was camping Labor Day Weekend with his XYL in Ohio. He was 599 with a 100W rig and a dipole, and he was solid all the time -

I had to turn down the phones. He gave me 569-589 with QSB, and we had a nice chat for quite a while. We were both intrigued to be portable and solid on 30M well after dark. After I signed with NO8D/P, AB9NZ called me and said he'd been listening in, and wanted me to know I was getting into the Chicago area real well. We gave each other 599's and exhanged a nice words both ways - he sounded like he was across the lake instead of across the Plains.

Steve Weber made this possible. He followed his dreams and worked hard to make this radio available to others. Thanks again Steve! The design of the ATS rigs is perfect for the type of trip where you can't think about taking an HF radio unless it's small and light. It's no rock crusher, but it's a real multiband performer on a simple wire once you get it matched. The control interface works fine in a dark tent, and the power consumption is incredible for a full 5W rig. After a total of 2 or more hours of operating, I used 10 to 20% of my LiIon pack - I was down to 11.8V. This thing continues to amaze me...and there are no sunspots now...wait til the new solar cycle gets going!

Hope this provides a little encouragement for some of you to put together a little pack with the stuff you need to go portable. At first, it's a little hassle, but it gets easier each time you go out and try it.

72/73

George/Carey
KX0R

3518. RE: [AT_Sprint] Wilderness Radio Operation with ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-06 14:01:06 UTC
From: Dale Putnam
Topic: 3517 Message: 3518

Way to go George!
An inspiring post, and even tho the cooler nights are coming on...
Winter camping is a lot of fun too. Although the fish are tougher to get
on the fly ......
Sure encourages thoughts of copying ... doing the same thing in a different location,
and Thank you Steve... is well in order. --... ...--Dale - WC7S in Wy

To: AT_Sprint@yahoogroups.comFrom: careyfuller@...: Sat, 6 Sep 2008 03:25:50 +0000Subject: [AT_Sprint] Wilderness Radio Operation with ATS-3B

Over the Labor Day Weekend I fulfilled a lifetime dream of operating a ham radio station from a remote wilderness location on a backpack trip. While I've operated QRP portable from numerous tent campsites in the woods and mountains here in Colorado, somehow I'd never managed to take an HF station on an overnight backpack trip into a real wilderness area. It finally happened.My trip was about 9 miles from the trailhead, into the Mount Zirkel Wilderness northwest of Walden, CO. Even though it was a major weekend, I had several square miles of stunning scenery, and three subalpine lakes full of large trout all to myself for more than two days!The station weighed about 3 pounds and consisted of the ATS-3B, 5 band modules in a small metal box, a 3-cell lithium-ion 12V 2.2AH pack, a homemade ALT-type L-network tuner, Palm paddles, small in-ear hones, a 57-foot inverted-L #22 antenna wire, a 16-foot #22 counterpoise, a 100-foot 3/32" dacron rope, a 60-foot 3/32" dacron rope, and a small organizer pack for protection. In addition I took an extra spinning reel spool loaded with braided line for putting up the antenna, plus two large steel nuts for use as casting weights. These items had a dual purpose - putting up the third rope for the "bear bag" food storage.The sloping INV-L antenna was about 33 feet high in a tree at its high end, and it sloped down to about 18 feet up in another tree. Then it came down vertically to the tent. The 16 feet of counterpoise was laid out on the ground away from the antenna. There was no feedline. I've used similar setups before. While Eznec shows it to be inferior to a center-fed dipole at 30 feet, it's less to carry and simpler to erect. Operating the rig was the fulfillment of a dream I've had for almost 50 years. My first contact was Friday after dark on 40M with KB0QZ in Centralia, MO. He was 579-589, but he only gave me 529. Nevertheless, we had a nice ragchew lasting more than 30 minutes; Marty was running 30W with an OCF dipole, and he sounded great up there at 10,000 feet.Saturday afternoon I tuned up on 20M and called CQ a few times, with no luck. The I heard DL5RBR working a contest, and I called him just for kicks. He came right back and we had a complete exchange lasting a few seconds - at least the rig was getting out on 20M. Later that night I tuned the antenna up on 30M, and had a wonderful, solid Q with NO8D/P, who was camping Labor Day Weekend with his XYL in Ohio. He was 599 with a 100W rig and a dipole, and he was solid all the time - I had to turn down the phones. He gave me 569-589 with QSB, and we had a nice chat for quite a while. We were both intrigued to be portable and solid on 30M well after dark. After I signed with NO8D/P, AB9NZ called me and said he'd been listening in, and wanted me to know I was getting into the Chicago area real well. We gave each other 599's and exhanged a nice words both ways - he sounded like he was across the lake instead of across the Plains.Steve Weber made this possible. He followed his dreams and worked hard to make this radio available to others. Thanks again Steve! The

design of the ATS rigs is perfect for the type of trip where you can't think about taking an HF radio unless it's small and light. It's no rock crusher, but it's a real multiband performer on a simple wire once you get it matched. The control interface works fine in a dark tent, and the power consumption is incredible for a full 5W rig. After a total of 2 or more hours of operating, I used 10 to 20% of my LiIon pack - I was down to 11.8V. This thing continues to amaze me...and there are no sunspots now...wait til the new solar cycle gets going! Hope this provides a little encouragement for some of you to put together a little pack with the stuff you need to go portable. At first, it's a little hassle, but it gets easier each time you go out and try it.72/73George/CareyKX0R

_____
See how Windows Mobile brings your life together—at home, work, or on the go.
http://clk.atdmt.com/MRT/go/msnnkwxp1020093182mrt/direct/01/

3519. Re: Wilderness Radio Operation with ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-06 20:40:38 UTC
From: scott mcmullen
Topic: 3517 Message: 3519

--- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@...> wrote:
>
> Over the Labor Day Weekend I fulfilled a lifetime dream of operating
a
> ham radio station from a remote wilderness location on a backpack
> trip. While I've operated QRP portable from numerous tent campsites
> in the woods and mountains here in Colorado, somehow I'd never
managed
> to take an HF station on an overnight backpack trip into a real
> wilderness area. It finally happened.
>

Congratulations; it's a hoot is it not?

I backpacked into the Zirkels about 18 years ago, and it is a
beautiful area.

73
Scott
W5ESE

3520. Flux under crystal!!! and an open CAP at C41.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-07 11:09:34 UTC
From: bruce.olney
Topic: 3520 Message: 3520

Howdy everyone!

A new ATS-3B is now (finally) on the air!!!

I had some trouble. I thought I would share, just in case anyone else is puzzled with the same issue(s).

After an evening or two, all was soldered. I cleaned the boards by soaking in denatured alcohol for a half hour or so, then scrubbed a bit with an old toothbrush. I then followed the calibration procedure. All checked out OK. This was back in July. I didn't get on the air with it right away. I still had to drill holes in the tin, etc. That required another week or two. (I'm WAY too busy!)

When all was tidy in the tin, no RX audio! That had me stumped for several weeks because I assumed that the calibration tone was OK during LO trim. (It worked before!) That caused me to look in the wrong area for the problem.

It ends up that I had two problems. C41 was open and the 4.9152 MHz BFO oscillator wasn't running. The latter was due to flux under the crystal. Evidently the residue provided just enough conductance to swamp out the oscillator. I cleaned the residue off with some acetone. Now finally the rig is up!!!

Note: Instead of using the solder that came with the kit I used whatever was laying around on the bench. I think the stuff I used has some pretty aggressive water soluble flux. The residue might have contained oxidation from the crystal can.

The experience was frustrating, but it forced me to understand the circuit theory.

The reward: The rig's maiden voyage was the last quarter of the NA CW Sprint. I worked thirteen different states throughout the country in about an hour using a random wire ~100' long and ~23' high, strung between a telephone pole and one corner of my house.

Bruce-WY7N
NAQCC member #1127
(NAQCC homepage: http://www.arm-tek.net/~yoel/index.html)

3521. Re: Wilderness Radio Operation with ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-07 13:07:53 UTC
From: dyarnes1
Topic: 3517 Message: 3521

George and All,

My hearty congratulations George. It sure sounds like you considered the trip to be a complete success, and it strikes me as being so as well. The little ATS3 rigs are absolutely perfect for this kind of thing, and you certainly confirmed it. Hopefully this won't be the only time you get to make such an outing, and if conditions improve a bit you might log a bunch of contacts. Even so, as you say, the lack of sunspots hasn't made it impossible to make some interesting contacts. As empty as the bands seem to be these days, you just never know when a station will jump out at you, including some good DX. Anyway, I've been very impressed with my ATS3, and I love showing it off to others--especially the QRO guys!!!! They can't possibly be having as much fun as we are, can they???

Dave W7AQK

--- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@...> wrote:
>
> Over the Labor Day Weekend I fulfilled a lifetime dream of operating a
> ham radio station from a remote wilderness location on a backpack
> trip. While I've operated QRP portable from numerous tent campsites
> in the woods and mountains here in Colorado, somehow I'd never managed
> to take an HF station on an overnight backpack trip into a real
> wilderness area. It finally happened.
>
> My trip was about 9 miles from the trailhead, into the Mount Zirkel
> Wilderness northwest of Walden, CO. Even though it was a major
> weekend, I had several square miles of stunning scenery, and three
> subalpine lakes full of large trout all to myself for more than two
> days!
>
> The station weighed about 3 pounds and consisted of the ATS-3B, 5 band
> modules in a small metal box, a 3-cell lithium-ion 12V 2.2AH pack, a
> homemade ALT-type L-network tuner, Palm paddles, small in-ear hones, a
> 57-foot inverted-L #22 antenna wire, a 16-foot #22 counterpoise, a 100-
> foot 3/32" dacron rope, a 60-foot 3/32" dacron rope, and a small
> organizer pack for protection. In addition I took an extra spinning
> reel spool loaded with braided line for putting up the antenna, plus
> two large steel nuts for use as casting weights. These items had a
> dual purpose - putting up the third rope for the "bear bag" food
> storage.
>
> The sloping INV-L antenna was about 33 feet high in a tree at its high
> end, and it sloped down to about 18 feet up in another tree. Then it
> came down vertically to the tent. The 16 feet of counterpoise was

> laid out on the ground away from the antenna. There was no feedline.
> I've used similar setups before. While Eznec shows it to be inferior
> to a center-fed dipole at 30 feet, it's less to carry and simpler to
> erect.
>
> Operating the rig was the fulfillment of a dream I've had for almost
> 50 years. My first contact was Friday after dark on 40M with KB0QZ in
> Centralia, MO. He was 579-589, but he only gave me 529.
> Nevertheless, we had a nice ragchew lasting more than 30 minutes;
> Marty was running 30W with an OCF dipole, and he sounded great up
> there at 10,000 feet.
>
> Saturday afternoon I tuned up on 20M and called CQ a few times, with
> no luck. The I heard DL5RBR working a contest, and I called him just
> for kicks. He came right back and we had a complete exchange lasting
> a few seconds - at least the rig was getting out on 20M. Later that
> night I tuned the antenna up on 30M, and had a wonderful, solid Q with
> NO8D/P, who was camping Labor Day Weekend with his XYL in Ohio. He
> was 599 with a 100W rig and a dipole, and he was solid all the time -
> I had to turn down the phones. He gave me 569-589 with QSB, and we
> had a nice chat for quite a while. We were both intrigued to be
> portable and solid on 30M well after dark. After I signed with
> NO8D/P, AB9NZ called me and said he'd been listening in, and wanted me
> to know I was getting into the Chicago area real well. We gave each
> other 599's and exhanged a nice words both ways - he sounded like he
> was across the lake instead of across the Plains.
>
> Steve Weber made this possible. He followed his dreams and worked
> hard to make this radio available to others. Thanks again Steve! The
> design of the ATS rigs is perfect for the type of trip where you can't
> think about taking an HF radio unless it's small and light. It's no
> rock crusher, but it's a real multiband performer on a simple wire
> once you get it matched. The control interface works fine in a dark
> tent, and the power consumption is incredible for a full 5W rig.
> After a total of 2 or more hours of operating, I used 10 to 20% of my
> LiIon pack - I was down to 11.8V. This thing continues to amaze
> me...and there are no sunspots now...wait til the new solar cycle gets
> going!
>
> Hope this provides a little encouragement for some of you to put
> together a little pack with the stuff you need to go portable. At
> first, it's a little hassle, but it gets easier each time you go out
> and try it.
>
> 72/73
>
> George/Carey
> KX0R
>

3522. When is a Radio too Small & Lightweight?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-08 03:17:24 UTC
From: Steve Galchutt
Topic: 3522 Message: 3522

When you leave home with out it! DOH!

Me and the boys went for a hike today. Not just any hike mind you. We were on a mission to tackle the NE face of Mt Herman (1800' at 45-60 degrees ...no trail, loose rock and brush and undergrowth to battle).

My motivation was 2-fold ...find a way to the top and once on top make a few QSOs with the ATS3a.

Well once on top and totally exhausted I sat and ate my PB&J sandwich while watching P&R nibble the vegetation. Refreshed I put an antenna and dug deep in the pack for the ATS3 ...no radio WHAT!!! ...Yikes!? I dumped the entire packs contents still no ATS! ...ARUGH! Dang I thought I packed it? I thought my packed seemed a little lighter (right! ...with the ATS you'd never know it's so lightweight)

I sat there feeling pretty stupid and imagining Rooster calling me a 'numb-skull' etc. I then pretend to call CQ and had few imaginary Qs. I took down the antenna and packed up and hiked down the mountain.

Sometimes the difference between reality and illusion is a fine line.

Pics:
http://picasaweb.google.com/n0tu.qrp/NEface#slideshow

73, Steve/R&P
http://n0tu.blogspot.com/

3523. RE: When is a Radio too Small & Lightweight?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-08 22:26:26 UTC
From: Steve Galchutt
Topic: 3522 Message: 3523

Here's the follow on video:
http://www.youtube.com/watch?v=AMXSSQlB3bI
Albeit there's not much ATS related content ...except for the
fact the guitar piece which is strangely enough named "Morse Code"! So
how many characters can you recognize?
73, Steve/R&P
http://n0tu.blogspot.com/

3524. DDS reference oscillator 50MHz NOT!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-10 03:06:33 UTC
From: Alan Shapiro
Topic: 3524 Message: 3524

Must be my freq. counter since I tried listening on my receiver at 10 MHz and sure enough, there was the ATS-3b.
Moving on to the LO freq. trim step.....
I press menu and now get the "CO", but I don't hear any tone in the headphones. I do get audio annunciators, etc., just not that tone at this step in the checkout.
Help!

With a band filter in place I hear no difference in the audio noise level with an antenna hooked up.

Any suggestions?

Alan, NM5S

3525. Re: DDS reference oscillator 50MHz NOT!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-12 03:00:40 UTC
From: gerardvk4tgl
Topic: 3524 Message: 3525

Allan

The lack of tone in the "CO" step sounds similar to a problem I had.
I hooked up an old transistor radio through a 3M ?? resistor to a pin
and worked backwards through the audio chain to find that the signal
dissappeared around U4.
Happened to have the earphones on while testing the voltages around
U4 and found there was a jump in noise when I pressed down on pin 1.
On REAL close inspection, noticed I had sat the solder on top of the
pin and not actually connected it to the pad. Easy fix ! Hope it
turns out to be a similar easy fix for you.

Good luck

Gerard VK4TGL

--- In AT_Sprint@yahoogroups.com, "Alan Shapiro" <nm5s@...> wrote:
>
> Must be my freq. counter since I tried listening on my receiver at
10
> MHz and sure enough, there was the ATS-3b.
> Moving on to the LO freq. trim step.....
> I press menu and now get the "CO", but I don't hear any tone in the
> headphones. I do get audio annunciators, etc., just not that tone
at
> this step in the checkout.
> Help!
>
> With a band filter in place I hear no difference in the audio noise
> level with an antenna hooked up.
>
> Any suggestions?
>
> Alan, NM5S
>

3526. Re: DDS reference oscillator 50MHz NOT!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-12 03:01:05 UTC
From: gerardvk4tgl
Topic: 3524 Message: 3526

Allan

The lack of tone in the "CO" step sounds similar to a problem I had.
I hooked up an old transistor radio through a 3M ?? resistor to a pin
and worked backwards through the audio chain to find that the signal
dissappeared around U4.
Happened to have the earphones on while testing the voltages around
U4 and found there was a jump in noise when I pressed down on pin 1.
On REAL close inspection, noticed I had sat the solder on top of the
pin and not actually connected it to the pad. Easy fix ! Hope it
turns out to be a similar easy fix for you.

Good luck

Gerard VK4TGL

--- In AT_Sprint@yahoogroups.com, "Alan Shapiro" <nm5s@...> wrote:
>
> Must be my freq. counter since I tried listening on my receiver at
10
> MHz and sure enough, there was the ATS-3b.
> Moving on to the LO freq. trim step.....
> I press menu and now get the "CO", but I don't hear any tone in the
> headphones. I do get audio annunciators, etc., just not that tone
at
> this step in the checkout.
> Help!
>
> With a band filter in place I hear no difference in the audio noise
> level with an antenna hooked up.
>
> Any suggestions?
>
> Alan, NM5S
>

3527. ATS-3B kit

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-12 06:52:26 UTC
From: rubines2000
Topic: 3527 Message: 3527

Hi

Will there be a new edition of the The ATS-3B kit ?
Eventually a pcb would also be sufficial, it appears I have most of
the parts at home.Would really like to buy this cute tx.

Cheers
Michael OE1MIS

3528. Re: [AT_Sprint] ATS-3B kit

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-12 10:52:50 UTC
From: Michael Harnage
Topic: 3527 Message: 3528

According to Steve's website he may produce some more 3b's around Christmas time. He's on a hike right now maybe when he gets back in a few weeks he'll let us know.

-mike

--- On Fri, 9/12/08, rubines2000 <rubitschka@...> wrote:

> Will there be a new edition of the The ATS-3B kit ?
> Eventually a pcb would also be sufficial, it appears I have
> most of
> the parts at home.Would really like to buy this cute tx.

3529. Octal switches

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-12 19:26:54 UTC
From: n8ewy
Topic: 3529 Message: 3529

I just finished my ATS 3-B. I have a long ways to go. I still haven't put power to it. I'm finishing up the band boards this weekend.

I have been looking extensively at the ATS/FCC-1 integration. That is my ultimate goal. When I was ordering parts such as the 2P2T switch and stand-offs and all I was confused by a couple things. I ordered from Digi-key. I got a good quality toggle switchand some of the other things. The only pushbutton "octal" type switch I found was made by a company named Cherry.. After looking at the picture for a long time, I got two of them and the two corresponding endcaps that allow you to clip into the hole you make in the box. The two switches each go from 0-7 (eight positions). I ganged the two together and with their endcaps on it appears much the same as the one in the file here in the group files.

Each swith has 5 connection points. One for a ground and four for connections from JP6 on the FCC-1.

My questions on this is: Is this set-up going to work? How do these switches work? I mean it makes sense to me that the five connections come from JP6 to the 5 connections on one of the switches. I'm wondering now if I got the wrong thing. How does the other switch and it's five connectors come into play? Did I screw up? I sort of understand the table on page 18 of the FCC-1 manual, but can someone help me visualize how this works with two switches with 5 connections each? If I do have the wrong thing and need to get the right "octal double pushbutton" switch, how does this work and get the right number of bands for the ATS?

Thank you and I hope this isn't too much to ask,

Dohn Smythe N8EWY
n8ewy@...

3530. Re: Sidetone volume.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-13 23:56:08 UTC
From: radio_kx0r
Topic: 3487 Message: 3530

--- In AT_Sprint@yahoogroups.com, "kc7fys" <kc7fys@...> wrote:

Thanks to all who suggested changing R12 to 1M. I did this mod to both my ATS-3A and ATS-3B today, and now sending is much easier on the ears. Riding the headphone volume control isn't a very practical way to deal with the excessive sidetone level in these rigs.

Unless your hearing is numb, you'll probably be glad once you remove R12 (marked 334, for 330K) and replace it with a 1 meg resistor. I used a 1/4W CF resistor surface mounted on the R12 pads - this works fine.

There are some artifacts in the audio related to the break-in T/R signals, and these are more apparent with the sidetone reduced - but they're much easier to tolerate than the piercing sidetone!

The sidetone was particularly loud when listening with sensitive in-ear phones at full gain - it's still strong with 1 meg for R12, but it's nice with the headphones turned down a little, as they normally are for QSO's with stronger signals.

72/73

> R12 brings it down nicely.
> Thanks,
> Jonathan
>
>
> --- In AT_Sprint@yahoogroups.com, Vojtìch Bubník <bubnikv@> wrote:
> >
> > > Anyway, the sidetone thing. Any ideas?
> >
> > Change R12 to 1M or higher.
>

3531. NAQCC Sprint Wednesday night!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-14 21:12:16 UTC
From: NAQCC
Topic: 2848 Message: 3531

NAQCC Sprint Wednesday night!
This coming Wednesday evening will be the monthly NAQCC Sprint for September, 2008.

I will refer you to the proper URL:

http://www.arm-tek.net/~yoel/sprint200809.html

There you will find all the details as to time, frequencies and also a special prize (a classic book in Morse on CD donated by Chuck Adams K7QO).

This month's Special Award goes to the winner of a drawing among the following: The one making the highest score in each division and having all ten digits (0-9) somewhere in the member numbers in their log.

This is a monthly event that caters to the CW veteran, the CW newcomer, straight key and bug fans. All are welcome to participate (this includes QRO); but you must use QRP power levels to compete for awards.

If you do not already have a NAQCC member number, now is the time to sign up and get one. Lifetime membership is free and there is no obligation on your part. Just fill out the form on the NAQCC website and receive your membership number and certificate FREE!!

Come join us and have a real good time!

73 de Dave VA3RJ
NAQCC #0004

3532. ATS-3A Receive Audio

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-15 01:07:43 UTC
From: k2qpn
Topic: 3532 Message: 3532

I just finished my ATS-3A. It was on the back burner for a long time. After fixing a few bugs - it lives. Just made a contact on 80M - the only filter module completed. The next step is alignment.

The receive audio seems a little raspy and not a pure note. Normal???

73 Bob K2QPN

3533. Re: ATS-3A Receive Audio

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-15 04:44:45 UTC
From: radio_kx0r
Topic: 3532 Message: 3533

--- In AT_Sprint@yahoogroups.com, "k2qpn" <K2QPN@...> wrote:

Bob,

Congratulations on getting your ATS-3A going! The time you spend on your filter modules and alignment will pay off in nice performance.

I agree that the audio is a little raspy - I notice this mostly on weaker signals. Not sure what the cause is - it will take some serious work to understand.

Possibilities: U3a LM4808 has clipper diodes in the feedback loop. U5 AGC IC AN6123MS probably contributes to the sound of the audio. Audio AGC is generally imperfect. I haven't studied this IC yet. U4 74LVC1G3157 is a T/R switch for the audio path, but it might have some limits.

For some reason my ATS-3A sounds a little smoother than my ATS-3B.

Perhaps someone else has already done some research on the audio?

Many QRP rigs have audio problems. It's hard to understand how engineers can build such wonderful, complex equipment and let the audio stages degrade the signals. The FT-817 has a lot of hiss noise. Many rigs have distortion at low audio levels - crossover distortion, etc., due to compromises made with op amps.

Bob, be sure to try some other earphones - the ATS rigs seem to care about the headphone impedance. Headphones/earphones/earbuds vary considerably. Also be sure to use a solid power supply or battery - not an old half-dead 9V battery.

Note that the audio op amp IC U3a LM4808, as well as the rest of the audio chain, runs on regulated 5V - the same 5V line that feeds both SA612 mixers. There is a 100uF cap on the output of U9, 812C50, the 5V linear regulator, so we don't expect to see any problems due to audio ripple on the 5V supply. The regulator makes the audio chain of the rig relatively insensitive to power supply resistance.

The audio section of the ATS rigs does an amazing job of making loud audio with very little current draw and only a few tiny parts - making it really clean might be done by picking the signal off upstream and routing it out to an outboard audio amplifier.

Let's see if someone else has worked on this...

72/73

KX0R

> I just finished my ATS-3A. It was on the back burner for a long time.
> After fixing a few bugs - it lives. Just made a contact on 80M - the
> only filter module completed. The next step is alignment.
>
> The receive audio seems a little raspy and not a pure note. Normal???
>
> 73 Bob K2QPN
>

3534. Sidetone Volume

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-15 08:08:10 UTC
From: kc7fys
Topic: 3534 Message: 3534

I found 1M was a bit too much attenuation with my small RatShack
powered speaker--but just right for headphone situations. I paralleled
another 1M 1/8th leaded resistor and it wasn't right either--but after
clipping one side of it I realized that I could 'switch' it in or out.
So now with a toothpick or something, I can get two levels. Primitive,
but functional.
Photo
<http://ph.groups.yahoo.com/group/AT_Sprint/photos/view/f302?b=11&m=f&o=0>
(My links never seem to work, so it's in the KC7FYS folder if you care
to see a blobby [but functional!]solder job.)
Jonathan

3535. Re: [AT_Sprint] Re: ATS-3A Receive Audio

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-15 11:28:10 UTC
From: Vojtěch Bubník
Topic: 3532 Message: 3535

Hi Bob and Carey.

The ATS-3b transceiver is a design optimized for low current and low number of parts and it works very well taking the constraints in mind. The audio distortion may be created by following:

- First mixer is overloaded and creates all kind of images. The images are filtered out by the narrow IF filter and by the AF amplifier, which serves as an AF CW filter, but the audio left will have all kind of hisses superimposed. The overload could be avoided by a RX attenuator, preselector, sharp tuning antenna or all together. Milan OK1IF posted a mod for attenuator pot, which is very easy, effective and time proven.

- IF crystal ladder filter may be too narrow and makes each of the noise spike ringing. The crystal ladder filter is matched by 470||1500 ohms = 360 ohm resistive load, but the input is certainly not matched to the same impedance. Correct input matching to the same impedance 360 Ohm at 5MHz is 38pF shunt capacitor from pin 4 of the first mixer to ground (missing) and serial inductor 21uH, not 10uH. Not sure whether this mod will help to reduce ringing though. The filters are still a bit magic to me.

- Diodes are clipping at the first stage of LM4808. This certainly happens on very strong signals. On the other way if one removes the clipping diodes, Steve warned that the AVC chip will lock up for couple of seconds. Also if the AVC chip is overloaded, it will create severe distortion. I tried to understand from the AVC chip datasheet what is the maximum allowed amplitude, but I failed. The levels are defined in dBm and input impedance is defined, but I was not able to get any sense from it. Probably HF generator and step attenuator would help more. Anyway, the AVC chip has min amplification of 7dB and max amplification of 24dB, which makes only 17dB span of regulation, that is about 3S. If signal is weaker, it will be weaker in earphones. If it is louder, it will be distorted by AVC or clipped by the diodes.

- Output amplifier. I found out, that the audio power amplifier stage has too much gain and creates distortion. If you feed your TRX with a noise source, you will find one main peak and two smaller peaks 30dB below the main peak. The secondary peaks disappear if you lower voltage gain of the output amplifier to half. I found it incidentally when I implemented the volume control by digital pot. So if you have sensitive earphones, it makes sense to decrease AF stage gain instead of using in-line pot on earphone cable.

> I agree that the audio is a little raspy - I notice this mostly on
> weaker signals. Not sure what the cause is - it will take some
> serious work to understand.

This could be the effect of all but the clipping diodes. The clipping diodes act only on real strong signals

> For some reason my ATS-3A sounds a little smoother than my ATS-3B.

Isn't there a change in caps around the crystal filter? Maybe the filter in ATS-3b is sharper?

First of all I would recommend to add an antenna attenuator. Then to lower AF gain, probably by replacing R3 and R5 by 150kOhm or lower if one uses sensitive earphones and is using in line regulator on earphones already.

BTW I have finished the mod on my ATS-3b for variable IF bandwidth and switchable CW/SSB audio filter. Works well, but the firmware is still rudimentary. The IF bandwidth is regulated from 200Hz to about 1.2kHz (400-1600Hz) and I could switch off CW peaking audio filter off from the SW. The SSB reception is a bit difficult given the audio bandwidth, but it is possible. I will post pictures soon.

73, Vojtech OK1IAK, AB2ZA

3536. N7RR/p-to-N0TU/p QSO

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-16 16:28:23 UTC
From: Steve Galchutt
Topic: 3536 Message: 3536

For me the QRP contact on Sunday while sitting at our lunch log overlooking Buffalo Peaks was truly a highlight of our trip and there were many! Admittedly, earlier in the day having my ATS3a 20m-CQ with only a 10' high dipole answered by a Alaskan station Doug/WL7CDC in Anchorage was heart stopping! But not as thrilling to catch Bruce/N7RR and Margaret/K7MWP in Yellow Aster Meadows in the Mount Baker Wilderness/WA.

At first I thought Bruce didn't hear my reply to his CQ. But was quickly rewarded with a QRZ?? My jumper-dipole antenna height was limited to only 10' due to the fact I grabbed the wrong feed line to take with ...but it still worked ok! Guessing maybe our 11,500' elevation helped some?

Honestly there's nothing 'sweeter' than making contact with kindred spirits while on similar wilderness adventures!

Bruce/N7RR writes:
> Sunday was our hike-out day, but we were pretty
> leisurely about it. I had rigged up my 20 m dipole
> in camp that morning and listened a bit. While
> packing up, I left the dipole up and attached my
> little amplified dual speaker to the DSW-20. I called
> CQ on exactly 14 060.00 kHz. At 1828 Z Steve
> N0TU answered. Accompanied by pack-goats
> Rooster and Peanut, Steve was camped near
> Buffalo Peak, Colorado. That portable-to-portable
> QSO was another fine hamming highlight!

Here's a few preview pics.
http://picasaweb.google.com/n0tu.qrp/BuffaloPks_QRP#slideshow/5246634937645119538
More pics and vids coming soon, Cheers Steve/R&P
http://n0tu.blogspot.com/

3537. What's the fix for this??

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-16 18:57:12 UTC
From: Asfco
Topic: 3537 Message: 3537

I have never seen anything like this before. Perhaps someone out there could let me know the best way to handle this problem.
The stereo headphone jack on my ATS 3A has come off the p/c board. One of the pads actually came off the board and has left me with nothing more than a small square hole.where it once sat.
I am able to see what looks like a couple thin wires running crossways in the opening. I have the pad which was attached to the leg of the stereo jack..
What's the best fix for this? I am a bit hesitant to try soldering it back into that hole without seeking advice
I have never seen this happen..
Anyone?
73
John W2GB

3538. Re: [AT_Sprint] What's the fix for this??

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-16 19:24:27 UTC
From: Mark Brueggemann
Topic: 3537 Message: 3538

--- Asfco <asfco@...> wrote:

> Perhaps someone out there could let me know the best
> way to handle this problem.

Be more gentle with the rig. It takes a lot of force to
tear a pad off a PCB like that.

> I am able to see what looks like a couple thin wires
> running crossways in the opening.

Sounds like it might be the remains of the pad. I'm not
aware of any via's on this board, other than the through
hole components.

> What's the best fix for this?

Clean up the damaged area on the PCB. If you're confident
the jack is still good you can re-use it, or install a new
one. Glue the jack down to the PCB with strong epoxy
(not crazy glue). After the glue is cured, use teflon
wire wrap wire to make connections from the connector leads
with missing pads to their nearest PCB trace, usually you
can just scrape a bit of soldermask away from the trace
that went to the missing pad and connect there. Put some
RTV or epoxy on the wires to secure them to the board.

> I am a bit hesitant to try soldering it back into that
> hole without seeking advice

The only holes associated with the connectors are for
alignment purposes, they don't have any electrical
function. The square pads are used for the connections
and aren't plated through.

Mark K5LXP
Albuquerque, NM

3539. Re: [AT_Sprint] What's the fix for this??

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-16 20:07:16 UTC
From: Asfco
Topic: 3537 Message: 3539

--- Asfco <asfco@...> wrote:

> Perhaps someone out there could let me know the best
> way to handle this problem.

Be more gentle with the rig. It takes a lot of force to
tear a pad off a PCB like that.
***I am extremly gentle with this rig and am aware that these parts are fragile...the jack along with one of the pads came completely off when i removed the headphone plug.
> I am able to see what looks like a couple thin wires
> running crossways in the opening.

Sounds like it might be the remains of the pad. I'm not
aware of any via's on this board, other than the through
hole components.

***YES as I stated the entire pad has come off the p/c board

> What's the best fix for this?

Clean up the damaged area on the PCB. If you're confident
the jack is still good you can re-use it, or install a new
one. Glue the jack down to the PCB with strong epoxy
(not crazy glue). After the glue is cured, use teflon
wire wrap wire to make connections from the connector leads
with missing pads to their nearest PCB trace, usually you
can just scrape a bit of soldermask away from the trace
that went to the missing pad and connect there. Put some
RTV or epoxy on the wires to secure them to the board.

*** Jack is fine I would be very hgesitant to try what you are suggesting on the 3A
> I am a bit hesitant to try soldering it back into that
> hole without seeking advice

The only holes associated with the connectors are for
alignment purposes, they don't have any electrical
function. The square pads are used for the connections
and aren't plated through.
*****Yers I am aware of this the hole I am refering to is the square hole left by the pad that has come off
Mark K5LXP

----- Original Message -----
From: Mark Brueggemann
To: AT_Sprint@yahoogroups.com
Sent: Tuesday, September 16, 2008 3:24 PM
Subject: Re: [AT_Sprint] What's the fix for this??

--- Asfco <asfco@...> wrote:

> Perhaps someone out there could let me know the best
> way to handle this problem.

Be more gentle with the rig. It takes a lot of force to
tear a pad off a PCB like that.

> I am able to see what looks like a couple thin wires
> running crossways in the opening.

Sounds like it might be the remains of the pad. I'm not
aware of any via's on this board, other than the through
hole components.

> What's the best fix for this?

Clean up the damaged area on the PCB. If you're confident
the jack is still good you can re-use it, or install a new
one. Glue the jack down to the PCB with strong epoxy
(not crazy glue). After the glue is cured, use teflon
wire wrap wire to make connections from the connector leads
with missing pads to their nearest PCB trace, usually you
can just scrape a bit of soldermask away from the trace
that went to the missing pad and connect there. Put some
RTV or epoxy on the wires to secure them to the board.

> I am a bit hesitant to try soldering it back into that
> hole without seeking advice

The only holes associated with the connectors are for
alignment purposes, they don't have any electrical
function. The square pads are used for the connections
and aren't plated through.

Mark K5LXP
Albuquerque, NM

3540. Re: [AT_Sprint] What's the fix for this??

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-16 21:28:23 UTC
From: Mark Brueggemann
Topic: 3537 Message: 3540

--- Asfco <asfco@...> wrote:

>> I am able to see what looks like a couple thin wires
>> running crossways in the opening.
...
> I stated the entire pad has come off the p/c board

1 photo=1000 words. If it's not a via, it's either
part of the pad or perhaps some of the laminating
adhesive.

> *** Jack is fine I would be very hgesitant to try
> what you are suggesting on the 3A

Why?

> I am refering to is the square hole left by the pad
> that has come off

Technically not a "hole" but "area". When you say "hole"
it implies a drilled or milled area that goes all the way
through the PWB.

I suggested the epoxy repair because with SMD parts
retention is accomplished by the solder fillet to the
PWB pads. There is no way to effect an adequately
strong bond of a repair pad back on the PWB, so you
need to secure the component to the PWB via a means
separate from it's terminations. If you wanted to
you could fabricate repair pads and solder the component
to them, obviating the need for jumper wires but you
still need to adequately bond the connector to the
PWB. I would consider removing the other connectors
and gluing them down as well as a preventative measure.

Mark K5LXP
Albuquerque, NM

3541. ATS check out/CAL

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-18 20:59:01 UTC
From: n8ewy
Topic: 3541 Message: 3541

I'm happiy as I can be. I did my smoke test and all was well. That is after I found an unsoldered side of an resistor. But all is well.

Can I use my MFJ 259B as a frequency counter to do the next step, "Reference oscillstor and frequency Calibration"? It has a frequency counter built in. It is a BNC connector. I'm pretty sure it's pretty accurate.

It says in the ATS manual, on page 23, at the bottom of the page, step 5, to connect the frequency counter to DDS Tp1. I assume that means to attach a piece of coax with BNC to the frq contr on the MFJ unit. Then how do I connect that to point TP1 on the circuit board? Do I solder a small piece of wire to stick up from TP1? Do I then connect the center wire of the coax to that wire sticking up from TP1? Do I connect the copper ground braid to anything? Then I assume I move the up/down switches until the frq cntr on the MFJ reads 10,000 Mhz. Is this sounding right????

Secondly ..... page 24 - "LO frq trim" ..... I don't have a scope so I will probably do as I have done in the past and connect a noise generator to the ant. Input and peak by ear the BFO cap. Sounding right?????

I'll have a couple more questions but this will get me started. Thank you in advance and I will await your response before I go poking around. It is working great so far.

Sincerely and thanks,
Dohn N8EWY

3542. Re: ATS check out/CAL

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-19 03:55:12 UTC
From: radio_kx0r
Topic: 3541 Message: 3542

--- In AT_Sprint@yahoogroups.com, "n8ewy" <n8ewy@...> wrote:

Dohn,

Congratulations on getting your ATS rig going!

Using the MFJ-259B as a counter to set the calibration sounds like a good idea at first...until you ask how accurate is that counter? No counter can be more accurate than its time base oscillator. Is the MFJ-259B's oscillator any more accurate than the ATS-3B's oscillator? Unless we compare to a standard of some kind, we cannot answer this question truthfully.

If you can compare your MFJ-259B to WWV or a lab frequency standard, and verify the accuracy of your count - and determine a correction to apply - then your idea is practical. Otherwise you might degrade the accuracy of your ATS rig.

If you have access to a recently calibrated lab counter, you could check your MFJ-259B against it, perhaps using a crystal oscillator at 10.0000 Mhz, and determine the approximate error. ALL measurement equipment has errors. If you have a tunable crystal oscillator, you could zero beat it to WWV using a receiver, and then count your oscillator's frequency with your MFJ-259B, so you can determine the error. You could also observe the drift of the MFJ-259B as it warms up, etc. I have an MFJ-259B, but I have never checked its frequency accuracy, so I don't know how far off it is at 10.0000 MHz. Of course, every one if different anyhow. This is why we need standards like WWV, calibrated lab equipment, etc.

One of the pieces of homebrew gear I really need is a tunable crystal oscillator. This becomes a secondary standard for tests when zeroed to WWV. It would be very useful.

In the meantime I did something sly. I found a way to tune my ATS-3A below 30 meters to 10.0000 Mhz. I checked it against WWV and decided it was only a few Hz off - close enough for ham radio. Then I used the ATS-3A as a test oscillator to verify the accuracy of the counter in my HP 8443A tracking generator/counter. This device has an oven-stabilized reference oscillator, intended to be very accurate, but it hasn't been calibrated for years. I found that it was about 20 Hz off, + or - maybe 10 Hz or so, at 10.0000 Mhz. Very rough numbers, but good enough for ham radio. I used the counter to calibrate my ATS-3B, applying the correction as closely as I could. I think I did OK, but I went through the routine a bunch of times. I checked a lot of stuff I didn't list also. This is a real time-burner !!

Your ATS rig will probably be accurate enough for ham radio with no calibration. I'd suggest not calbrating it to any other device or counter unless you can actually VERIFY the accuracy of whatever you use as a frequency standard. This does NOT mean trusting the specs, thinking positively, believing it's perfect, guessing, or having a lot of faith. You can always come back and calibrate your radio later. It will not have fantastic accuracy even when calibrated, because of temperature effects, etc.

Has anyone out there measured the frequency drift of his ATS rig over temperature? I want to try this, because I have operated well below freezing with mine, and I plan to do that on future winter campouts. Right now I have no idea how much it changes frequency.

I know enough about frequency measurements to know that I am a ham radio operator, not a standards engineer! This is a serious subject, and it requires rigorous thinking and measurements. I have known a few of these engineers, and they are very special people! However, even with crude techniques and cheap tools you can get within 10 or 20 Hz as long as you can hear WWV at 10.0000 Mhz, and you can build or get hold of a stable oscillator to use as a comparison device.

On question 2 your idea seems OK - plenty of others have used noise sources or other techniques. There's plenty of information already on this site in these thousands of messages about how to do this many different ways. All you have to do is search with clever words, and you'll find many detailed messages from builders who tuned up their rigs last year or earlier. I used my scope and followed the manual, and so I recommend that you borrow a scope and do that. It seemed like a pretty good technique - I went through it several times.

I think every time you do the cal, you need to do the whole cal. It starts over when you enter cal mode. The old data is erased. The cal routine in this rig is actually quite cool and it enables the rig to be set up for better accuracy than most small rigs!

Good questions, and I hope others will chime in with better ideas and more insight. Striving for accuracy is a good thing, and it always leads to greater understanding of how our radios work.

Wish I had easier answers...

72/73

Carey
KX0R

> I'm happiy as I can be. I did my smoke test and all was well.
That
> is after I found an unsoldered side of an resistor. But all is
well.
>

> Can I use my MFJ 259B as a frequency counter to do the next
> step, "Reference oscillstor and frequency Calibration"? It has a
> frequency counter built in. It is a BNC connector. I'm pretty
sure
> it's pretty accurate.
>
> It says in the ATS manual, on page 23, at the bottom of the page,
> step 5, to connect the frequency counter to DDS Tp1. I assume that
> means to attach a piece of coax with BNC to the frq contr on the
MFJ
> unit. Then how do I connect that to point TP1 on the circuit
board?
> Do I solder a small piece of wire to stick up from TP1? Do I then
> connect the center wire of the coax to that wire sticking up from
> TP1? Do I connect the copper ground braid to anything? Then I
> assume I move the up/down switches until the frq cntr on the MFJ
> reads 10,000 Mhz. Is this sounding right????
>
> Secondly ..... page 24 - "LO frq trim" ..... I don't have a
scope
> so I will probably do as I have done in the past and connect a
noise
> generator to the ant. Input and peak by ear the BFO cap. Sounding
> right?????
>
> I'll have a couple more questions but this will get me started.
> Thank you in advance and I will await your response before I go
> poking around. It is working great so far.
>
> Sincerely and thanks,
> Dohn N8EWY
>

3543. Re: What's the fix for this??

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-19 12:55:26 UTC
From: Bill
Topic: 3537 Message: 3543

I would remove all 3 jacks and replace them with panel mount jacks like they use on the rockmite's. I love my ATS3B, but the jacks could be better. Even before you posted this, I had already planned on doing this to mine. I cringe every time I pull the power plug out.

Someone else already explained how to repair this. Scrape off some enamel from the broken trace and run wires to the panel mount jacks. Those will not give you any trouble. This should be a simple fix. GL.
73, Bill NT9K
http://www.nt9k.com

--- In AT_Sprint@yahoogroups.com, "Asfco" <asfco@...> wrote:
>
> I have never seen anything like this before. Perhaps someone out there could let me know the best way to handle this problem.
> The stereo headphone jack on my ATS 3A has come off the p/c board. One of the pads actually came off the board and has left me with nothing more than a small square hole.where it once sat.
> I am able to see what looks like a couple thin wires running crossways in the opening. I have the pad which was attached to the leg of the stereo jack..
> What's the best fix for this? I am a bit hesitant to try soldering it back into that hole without seeking advice
> I have never seen this happen..
> Anyone?
> 73
> John W2GB
>

3544. Re: [AT_Sprint] Re: What's the fix for this??

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-19 13:05:52 UTC
From: Vojtěch Bubník
Topic: 3537 Message: 3544

> I would remove all 3 jacks and replace them with panel mount jacks
> like they use on the rockmite's. I love my ATS3B, but the jacks could
> be better.

I believe the opposite. The panel mount sockets are usually made of thinner brittle plastic. The SMD sockets used in ATS3b seems to be fine to me. I had a lot of problems with panel mount sockets. I had never any problem with PCB mount socket.

> Someone else already explained how to repair this. Scrape off some
> enamel from the broken trace and run wires to the panel mount jacks.
> Those will not give you any trouble. This should be a simple fix. GL.

As a fix, panel mount jack may be a good way. Another possibility is to buy a through hole socket, drill the holes, make islands from the ground plane on the other side of the PCB and wire the newly created pads.

73, Vojtech OK1IAK

3545. Re: [AT_Sprint] Re: ATS check out/CAL

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-19 13:10:33 UTC
From: Michael Harnage
Topic: 3541 Message: 3545

Or better yet, tune the ATS oscillator to WWV directly during calibration.

-mike/w1mt

--- On Fri, 9/19/08, radio_kx0r <careyfuller@...> wrote:

> If you have a tunable crystal
> oscillator, you
> could zero beat it to WWV using a receiver,

3546. Re: What's the fix for this??

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-19 13:40:52 UTC
From: Bill
Topic: 3537 Message: 3546

I mean use metal panel mount jacks like this:
http://www.flyaas.com/acatalog/JB-11HS.JPG
This type has a outer lock nut and will last forever and will make it easier to plug in and out without fear of ripping out the pads.

Maybe I wouldn't have needed to to do this if I had been able to get my jacks to protrude from the altoids tin. I got mine close, but they still won't stick through the tin.

I wonder if anyone has a ATS3B template in GIF of JPG format?
73, Bill NT9K..

--- In AT_Sprint@yahoogroups.com, Vojtìch Bubník <bubnikv@...> wrote:
>
> > I would remove all 3 jacks and replace them with panel mount jacks
> > like they use on the rockmite's. I love my ATS3B, but the jacks could
> > be better.
>
> I believe the opposite. The panel mount sockets are usually made of thinner brittle plastic. The SMD sockets used in ATS3b seems to be fine to me. I had a lot of problems with panel mount sockets. I had never any problem with PCB mount socket.
>
> > Someone else already explained how to repair this. Scrape off some
> > enamel from the broken trace and run wires to the panel mount jacks.
> > Those will not give you any trouble. This should be a simple fix. GL.
>
> As a fix, panel mount jack may be a good way. Another possibility is to buy a through hole socket, drill the holes, make islands from the ground plane on the other side of the PCB and wire the newly created pads.
>
> 73, Vojtech OK1IAK
>

3547. Re: [AT_Sprint] ATS check out/CAL

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-20 01:54:12 UTC
From: Full Some
Topic: 3541 Message: 3547

Dohn

I soldered a resistor wire clipping with a loop on the end for TP1 I also soldered a resistor wire clipping on the phone jack for another test point. Just make sure the leads are not very long - TP1 is very close to the band board and one's fingers.

I found that my MFJ 259 was not sensitive enough to detect the oscillator on the ATS II, III, III B or other transceivers - I have a low power rf amp that I attached. On the ATS 3B I first used the WWV method described by Mike but reverted to a Radio Shack counter with the WWV method - it was more than close enough. Final ATS accuracy was checked while transmitting at 2+ watts into a dummy load and then using
the MFJ 259 with a stub antenna (NOT attached to the ATS III). I also used another transceiver of known good calibration to check the
ATS transmit and receive frequencies.

3548. Re: ATS check out/CAL

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-20 01:57:36 UTC
From: radio_kx0r
Topic: 3541 Message: 3548

--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:

Mike,

Please explain how to do this - for all of us - it isn't quite obvious - we need a few clues and details. Your method is superior because it eliminates the errors of other instruments.

1) Do you connect an antenna to the ATS rig and zero beat the signal that feeds through? Which band?

2) Or do you use coupling from the rig's oscillator to a receiver that's also listening to WWV? I think this must be the answer. How do you couple the signal from the ATS rig without loading the ATS oscillator - with a pickup loop, or just a wire positioned close by?

3) Do you just listen to the beats or do you use a scope to get closer? Please share your experience!

Thanks

Carey
KX0R

> Or better yet, tune the ATS oscillator to WWV directly during calibration.
>
> -mike/w1mt
>
>
> --- On Fri, 9/19/08, radio_kx0r <careyfuller@...> wrote:
>
>
> > If you have a tunable crystal
> > oscillator, you
> > could zero beat it to WWV using a receiver,
>

3549. Wilderness Radio Operation with ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-20 05:07:51 UTC
From: radio_kx0r
Topic: 3517 Message: 3549

KX0R will attempt to operate from a campsite at 11,000 feet in the Indian Peaks Wilderness about 20 miles west of Boulder, CO, tomorrow night (Saturday evening your USA local time). I'll try to be on after 0200 UTC, 21 Sep UTC, weather permitting. This is 8 PM MDT Saturday evening, local time.

Hopefully I'll be running my ATS-3B, a BLT, and a dipole fed with ladder line. Look for me on 30M or 40M at first, near the ATS's default frequencies. After 0400 UTC (10 PM MDT Saturday night) I'll be on 40M if things are going OK. There's a chance of thunderstorms, so I may have to wait.

I'll try again Sunday morning, on 20M or 30M, weather permitting.

Maybe I can catch a few of you. I was at the site a week ago, and it looks great! On a little hill above a lake, with beautiful takeoff to the east.

72,

Carey
KX0R

3550. Re: Green trimmers in kit???

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-20 09:31:43 UTC
From: gm0sim
Topic: 3474 Message: 3550

I got my ATS3B second hand as an untouched unopened kit (bags still sealed and in the original envelope so I know it is a "good un"). The date on Steves's envelope is 22nd Oct 07 so that should identify the batch,

The trimmer caps I've got are 9 off green top adjust and 4 off brown bottom adjust.

Ive obviously used one of the green top adjusts on the main board as that then leaves me with a "symetrical amount" for the filter boards, but which one on which board?.

Monunting the green ones upside down isnt a problem but can someone please give me a pointer as to which go where as I cannot see any other identification on them. (& apologies if this has already been covered on a Q&A I've missed).

As a seperate matter, has anyone (preferably in europe as this makes postage easier) knocked up any spare filter board blank PCB's.

I want to try out some of the other filter options and configurations (eg the 7.02M ceramic filter as I have one lying around and the other LC value filter options) however I prefer to do this on a copy and leave the original alone so I can easily go back to it (and run "side by side" tests to see which variant I prefer). If it aint broken dont fix it (fix another!).

I must say, this is the best put together kit I have ever come across. I initially wasnt looking forward to soldering that DDS chip but it turned out to be much less of a problem than I thought.

Hats off to you Steve. Many thanks.

Ian GM0SIM

--- In AT_Sprint@yahoogroups.com, "Dohn" <n8ewy@...> wrote:
>
> Hi Vojtech
>
> I know I saw this addressed at some web page, but I can't remember which it
> was. It had pics.
>
> I still cannot picture any way to mount this cap and have the adjustment
> side (bottom) of the cap facing up for adjustment. Not without bending the

> leads of the cap 180 degrees. Then the flat side could face the
right
> direction and the adjustment screw would be accessible. It seems
like It
> would be hooked up correctly as far as polarity goes. (Flat side
facing the
> right direction)
>
> Dohn
> N8EWY
>
> _____
>
> From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com]
On Behalf
> Of Vojtech Bubník
> Sent: Saturday, August 23, 2008 6:18 PM
> To: AT_Sprint@yahoogroups.com
> Subject: Re: [AT_Sprint] Green trimmers in kit???
>
> Hi Dohn.
>
> It is a known issue. One of ATS-3b batches contains those trimmers.
I
> remember Steve ran out of the correct ones and he was unable to
obtain the
> same type. His recommendation is to solder them to the other side
of the
> board, tune the filter, remove the trimmers and solder them to the
bottom
> side of the filter board.
>
> Vojtech
>

3551. Re: [AT_Sprint] Re: Green trimmers in kit???

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-20 12:13:12 UTC
From: Michael Harnage
Topic: 3474 Message: 3551

If you got the manual on CD with the kit it should explain, but if I remember correctly the brown are for the 80 and 40 boards.

< http://groups.yahoo.com/group/AT_Sprint/message/2907 >

-mike/w1mt

--- On Sat, 9/20/08, gm0sim <gm0sim@...> wrote:

> Ive obviously used one of the green top adjusts on the main
> board as
> that then leaves me with a "symetrical amount"
> for the filter boards,
> but which one on which board?.

3552. Re: [AT_Sprint] Re: ATS check out/CAL

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-20 12:15:34 UTC
From: Michael Harnage
Topic: 3541 Message: 3552

#2.

I wrote this up on my website for the 3. The procedure is the same except for where the 3b differs (no inductor can). Use 606Hz (Steve uses 606Hz for the 3B).

< http://w1mt.qrpradio.org/ats3calibration.html >

-mike/w1mt

--- On Sat, 9/20/08, radio_kx0r <careyfuller@...> wrote:

> From: radio_kx0r <careyfuller@...>

> 2) Or do you use coupling from the rig's oscillator to
> a receiver
> that's also listening to WWV? I think this must be the
> answer. How
> do you couple the signal from the ATS rig without loading
> the ATS
> oscillator - with a pickup loop, or just a wire positioned
> close by?

3553. Re: Green trimmers in kit???

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-20 15:41:07 UTC
From: gm0sim
Topic: 3474 Message: 3553

Sill me. Many thanks you are totally correct and the CD version identifies Brown for 40 & 80 and green for the other bands. I had forgotten that I'd printed the manual off the forum here. The CD version also suggests just clipping the caps to the "wrong" side of the board, aligning it, then swapping the caps to the right side to be soldered in but I'm more tempted to the "upsidedown" option so I can tweek again later

--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:
>
> If you got the manual on CD with the kit it should explain, but if I remember correctly the brown are for the 80 and 40 boards.
>
> < http://groups.yahoo.com/group/AT_Sprint/message/2907 >
>
> -mike/w1mt
>
>
>
> --- On Sat, 9/20/08, gm0sim <gm0sim@...> wrote:
>
>
> > Ive obviously used one of the green top adjusts on the main
> > board as
> > that then leaves me with a "symetrical amount"
> > for the filter boards,
> > but which one on which board?.
>

3554. Run For the Bacon - tonight!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-21 19:59:22 UTC
From: Larry Makoski W2LJ
Topic: 3554 Message: 3554

Hello everyone!

The Flying Pig's monthly "Run For the Bacon" QRP CW contest is tonight!

This friendly, low pressure, 2 hour sprint runs from 9:00 to 11:00 PM Eastern DST.

For all the details, please visit http://www.fpqrp.com/fpqrprun.php

The Flying Pigs QRP ARCI is now maintaining an archive of previous "pig-runs" for your viewing pleasure.

See you in the troughs!

73 de Larry W2LJ
FP# 612

3555. Run for the Bacon, 9/21/2008, 6:00 pm

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-22 00:42:12 UTC
From: AT_Sprint@yahoogroups.com
Topic: 3555 Message: 3555

Reminder from: AT_Sprint Yahoo! Group
http://groups.yahoo.com/group/AT_Sprint/cal

Run for the Bacon
Sunday September 21, 2008
6:00 pm - 8:00 pm
(This event repeats every month on the third Sunday.)
Location: Your shack or anywhere

Notes:
This Sunday evening, the Flying Pigs Amateur Radio Club International will be holding its monthly Run For The Bacon. This is a friendly, two hour QRP CW Sprint, which is open to ALL radio amateurs, will last from 9:00 - 11:00PM EDT (0200-0400 UTC Monday).

You may work stations once per band on 160, 80, 40, 20, 15 or 10 Meters. Suggested starting frequencies are 1.812, 3.562, 7.044, 14.062, 21.062, and 28.062 MHz.

The exchange is RST, S/P/C (State, Province, Country) and Flying Pigs membership number. If you're not a member of the Flying Pigs, and would like to be; then please cli

All Rights Reserved
Copyright ? 2008
Yahoo! Inc.
http://www.yahoo.com

Privacy Policy:
http://privacy.yahoo.com/privacy/us

Terms of Service:
http://docs.yahoo.com/info/terms/

3556. It's alive! It needs calibratin'

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-22 09:18:11 UTC
From: n8ewy
Topic: 3556 Message: 3556

This is a copy of the email I sent to w1mt, requesting clarification on a couple of things from his calibration procedure. Things, that I'm sure you may all realize. I'm just sort of new at this. I'm absorbing as much as possible. Please feel free to discect this thing and reply group. Here it is:

Thank you for responding to my first email message so quickly. I'm ready to proceed with the "Calibration Procedure". I have a couple questions about it. Not because it is written poorly. I just don't understand things quickly enough. BUTT! I learn as I go! Thank you for your help this far.

Prestep - Peak which IF transformer? Which component? I have a noise generator. I have an "Elecraft N-Gen, wideband noise generator". With a double female BNC adaptor I can connect the N-Gen directly to my ATS 3-B. Does this sound right? N-Gen to ATS? Which component do I tweak for greatest "noise"? If it is CT1, I adjusted it and could not hear any change in noise level. If it is a toroid, is it just a matter of spacing the magnet wire?

Step #1 - I assume the trimmer cap is CT1. I set a marker line, up and down, on my spectrogram at 600 Hz. I was able to get movement out of the largest peak, graphically, on spectrogram, to where I placed the tip/point of the peak to rest on 600 Hz. Is this sounding right?????

Step #2 - Connect my K2, audio out, to spectrogram??? Tune my K2 to 10,000MHz????????? How does one "set the carrier" of WWV??? Where and from what rig should I see 606.8MHz?

Step #3 - Do I put the test wire connected to TP1 on or near anything specific to see this signal on Spectro????? Will it just be another "peak"??? So I still have my K2 connected to the computer with a fairly wide peak centered on the 600 Hz line I put on it?????????? Correct? And I'm now looking for another peak (being generated by the ATS board in CF mode) to move into the picture of Spectro. I'm gonna line these up? Superimpose them, as it were. How important is the 606.8 Hz number? Should I have set it in step #2 to 606.8Hz instead of 600 Hz carrier.

Step #4 - It says to move the up/down buttons to center the ATS rig's tone on the previously chosen frequency. At 600 Hz or 606.8Hz????

Thank you in advance for any help you can provide.

Dohn Smythe N8EWY
n8ewy@...

3557. Re: [AT_Sprint] It's alive! It needs calibratin'

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-22 11:25:06 UTC
From: Michael Harnage
Topic: 3556 Message: 3557

Dohn,

I have included some notes inline below:

--- On Mon, 9/22/08, n8ewy <n8ewy@...> wrote:

>
> Prestep - Peak which IF transformer? Which component?

This is only applicable to the ATS-3, NOT the 3A or 3B.

>
> Step #1 - I assume the trimmer cap is CT1. I set a marker
> line, up
> and down, on my spectrogram at 600 Hz. I was able to get
> movement
> out of the largest peak, graphically, on spectrogram, to
> where I
> placed the tip/point of the peak to rest on 600 Hz. Is
> this sounding
> right?????

Correct.

>
> Step #2 - Connect my K2, audio out, to spectrogram??? Tune
> my K2 to
> 10,000MHz????????? How does one "set the
> carrier" of WWV??? Where
> and from what rig should I see 606.8MHz?

The ATS rig sidetone is set to 606.8Hz by the firmware. Simply put the carrier of WWV on 606.8Hz. (For me, this puts my dial right near 10.000.000).

>
> Step #3 - Do I put the test wire connected to TP1 on or
> near anything
> specific to see this signal on Spectro????? Will it just
> be
> another "peak"??? So I still have my K2
> connected to the computer
> with a fairly wide peak centered on the 600 Hz line I put
> on
> it?????????? Correct? And I'm now looking for another
> peak (being
> generated by the ATS board in CF mode) to move into the
> picture of

> Spectro. I'm gonna line these up? Superimpose them,
> as it were.
> How important is the 606.8 Hz number?

The idea here is to set the 10MHz output from part 1 of the calibration equal to the carrier signal from WWV. It's not critical that 606.8Hz be used here, as you just calibrating the ATS rig to WWV.

>
> Step #4 - It says to move the up/down buttons to center the
> ATS rig's
> tone on the previously chosen frequency. At 600 Hz or
> 606.8Hz????

I use 606Hz myself. Depends on how good your ear is as to whether you want to use 600 or 606.

Steve's tuning step during calibration is about 10Hz so you should be able to get within 5Hz during part 1 of the calibration. Part 2 (step 4) is setting the offset in the firmware to match the trimmer cap you set previously.

-mike/w1mt

3558. Re: Octal switches

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-23 21:59:46 UTC
From: w9goc
Topic: 3529 Message: 3558

Dohn,
I don't have an FCC-1, so I am Not speaking from personal experience. Looking at the switch table you referenced on page 18 of the FCC-1 manual, it seems to me that you'd have an easier time with a single Cherry Hex switch instead of two octal switches. See the PAGA-3100 or CH687-ND and similar from Digi-Key.

I have another question on the FCC-1 truth table on page 18 - - why is the 15 meter position the same as the 'Dir' position? It would seem that 15 meters should be '0111' instead of the indicated '1111'

One person's opinion,

Frederick
W9GOC

3559. FW: Hiker safe with help of ham radio -- Morse

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-24 20:43:35 UTC
From: ken Lotts (at home)
Topic: 3556 Message: 3559

This is a great story.. My ATS3B is definitely in my pack these days!

Ken Lotts aa7jc

From: owner-glowbugs@...
[mailto:owner-glowbugs@...] On Behalf Of
Sparkwireless@...
Sent: Wednesday, September 24, 2008 12:06 PM
To: glowbugs@...
Subject: GB> Hiker safe with help of ham radio -- Morse

Not OT, and maybe not tube, but good all the same.

Roy KJ4TG

Hiker safe with help of ham radio

By JACKSON HOLTZ

EVERETT, Wash. - A series of dots and dashes bouncing off the ionosphere Sunday helped save a hiker stranded on Buck Creek Pass east of Glacier Peak.

The hiker who broke his leg used a low-voltage portable radio and Morse code to send out a call to help.

Six hundred miles away in Bozeman, Mont., Robert Williams was testing his ham radio Sunday when he heard the call signal, "W-7-A-U."

Williams replied and quickly learned, in the dashes and dots, that he was talking with a 62-year-old Corvallis, Ore., man, who had slipped and hurt himself in the high Cascades of Western Washington.

"I just happened to be at the same frequency," Williams, 65, said Monday. "It's just a stroke of luck that turned out great."

Williams called 911 and was connected to Snohomish County search-and-rescue officials. He spent much of Sunday and Monday relaying information including GPS coordinates from the hiker to rescuers.

"It was quite an experience," Williams said. "I'm just glad that he was a ham radio operator and that I was able to talk to him. It made the difference for him."

On Sunday, rescue crews reached the man who had set up camp on Buck Creek Pass, at about 6,000 feet just west of the Chelan County line.

He was taken to safety Monday on horseback.

The call set in motion one of two mountain rescues Sunday.

A second team of rescuers went up Three Fingers Mountain after a man there fell about 200 feet on a glacier near the summit.

Including the weekend rescues, search-and-rescue teams this year have now responded to 100 missions, Snohomish County sheriff's Sgt. Danny Wikstrom said.

Both of the injured men in the past two rescues were well prepared for the wilderness conditions, he said.

"To have that equipment will save your life," he said.

The man on Three Fingers was hiking with three other people when he fell. His climbing party summoned help, officials said.

On Monday afternoon, he was taken by helicopter off the mountain to Providence Regional Medical Center Everett, sheriff's Lt. Rodney Rochon said.

He wasn't able to walk when he was loaded into the chopper, Rochon said. He apparently had sprained his ankle and knee in the fall.

Bad weather Sunday prevented helicopter rescues of both men. Teams spent a night in snow and frigid conditions in the mountains.

Rescuers on Three Fingers used a pulley system to hoist the man off the glacier and onto the trail, Wikstrom said.

Teams then carried the man to Goat Flats, where he was loaded onto the chopper.

Rescuers on horseback reached the man on Buck Creek Pass on Monday morning.

The trail from Darrington was washed out from recent storms and wasn't passable, so crews approached along the Trinity Trail near Lake Wenatchee, Wikstrom said.

It isn't the first time amateur radio operators have helped out with an emergency situation, said Allen Pitts, a spokesman for the American Radio Relay League based in Newington, Conn.

The radios work well when other kinds of communication fail, he said.

Ham radio operators were of paramount importance after Hurricane Katrina and when a tsunami ravaged southeast Asia.

Still, it's rare that Morse code is used to initiate a rescue, he said.

Amateur radio operators used to be required to know Morse code to get a license. That requirement was dropped a few years ago.

Since then, Morse code has actually gained popularity, Pitts said.

"Morse code will get through when no other type of communication will," Snohomish County Hams Club President Grant Hopper said.

Williams, the Montana man, said he was able to understand the injured man's code even when his signal became very weak. Voice communication over the airwaves likely would have become garbled or misunderstood.

The man had a low-voltage radio transmitter, which operates on about as much power as it takes to make a tiny Christmas tree light sparkle.

In the right conditions, radio signals can bounce off the Earth's atmosphere and ricochet thousands of miles.

"A signal like that can skip a long way around the world," Williams said. "You can talk to Europe or Asia given the right conditions."

This is the first time Williams has helped someone in danger using his radio.

The rescue likely wouldn't have been possible if the injured man weren't a competent radio operator, Williams said.

"My guess is that he was just waiting to hear from somebody," he said. "I happened to be the lucky one."

A service of the Associated Press(AP)

3560. Wrong voltage read out

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-25 21:07:25 UTC
From: hb9tso
Topic: 3560 Message: 3560

Hello together

My ATS3B runs well, but there is a small issue:

The voltage readout is not correct. i get all the time: 21r6 (firmware up date)

and 20-10 with the original firmware

I say thanke you in advance for the support

Very nice regards Rolf / HB9TSO

3561. Wrong voltage read out

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-25 21:26:39 UTC
From: hb9tso
Topic: 3560 Message: 3561

Hello together

I have a wrong DC voltage read out with the original firmware i get:
20-10

With the Firmware update i get 21r6.

The indication is the same no matter what the supply voltage is
(6 up to 14 volts).

I thanke you very much in advance for the support

Nice regards Rolf / HB9TSO

3562. Re: [AT_Sprint] Wrong voltage read out

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-25 22:13:23 UTC
From: Michael Harnage
Topic: 3560 Message: 3562

Rolf,

Is this a new problem with a previously working rig or is it first time problem?

I'll guess it's the first time and the likely problem is with R45/R46. Double check them.

-mike/w1mt

--- On Thu, 9/25/08, hb9tso <hb9tso@...> wrote:

> From: hb9tso <hb9tso@...>

> The voltage readout is not correct. i get all the time:
> 21r6 (firmware
> up date)
>
> and 20-10 with the original firmware

3563. Get me outta this Alternative Key Mode!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-26 07:26:31 UTC
From: kc7fys
Topic: 3563 Message: 3563

Just kidding--but this has been happening to me... I know the answer is simple. With the W1MT firmware installed, what is the button that gets me out of alternative key mode? I have been forced by my own goofiness a couple times to power down mid-QSO when I accidentally got myself into that mode--and was unable to use the mode itself to finish out the QSO. Happened again just now. I'm getting into that mode by accident, perhaps because I often use M1 repeatedly, as opposed to using beacon mode and listening between CQs.
How do I get the rig out of this mode without recycling power?
Thanks,
Jonathan KC7FYS

3564. Re: Get me outta this Alternative Key Mode! ^^

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-26 08:18:42 UTC
From: kc7fys
Topic: 3563 Message: 3564

Found it.

^^ ☐ Toggle Button Paddle mode, D-dit U-dah

Jonathan

3565. new morse trainer for Mac OS

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-26 20:10:40 UTC
From: john shadle
Topic: 3565 Message: 3565

Just wanted to give a heads up to those of you who use Mac OS (or know of folks who use Mac OS) about a new Morse Code learning device which is available for Mac OS.

This program is called the AD5RX Morse Trainer and it may be downloaded *free* from the Source Forge site:

http://sourceforge.net/projects/morsetrainer/

Jonathan Nall, AD5RX, is a ham who lives out in 6-land these days. By day he works in the tech biz doing hardware verification, but he really enjoys tinkering around with other things in his spare time. In this case, he's offering a G4FON-like program for Mac users. It has quite a bit of functionality of the G4FON program (QRM, QSB, effective speed and actual speed settings, etc.). In addition to those basic features, it offers the ability to set the number of stations QRMing and the ability of the program to read the code back to you (in English) to check your written (or typed) transcription.

The motivation behind developing this program (which he has poured many hours into) is to provide a quality, free Morse Code-learning program to Mac users who have been limited to pay-only or inferior programs in the past.

The program will always remain free, but since the program is still in its infancy he is requesting that Mac hams download it and try it out. Please email all comments to ad5rx@.... He is specifically looking for comments related to the UI and the speech function (mentioned above).

My interest in this is only that AD5RX is a friend of mine from college who happens to not subscribe to this list. That's all. I had nothing to do with the development of the program, personally.

73
-john W4PAH

3566. Construction question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-27 01:04:41 UTC
From: n8ewy
Topic: 3566 Message: 3566

I completed my 3-B last week and did something a little stupid today. I wanted to change out my connector for TP1. I pulled the connector I had there and when I had cleared the hole with solder braid I noticed I had lifted the small circle around the hole and in the process lifted the trace a little in both directions. To R19 and in the other direction to U7.

The trace is still there connected to R19, but lifted off the board, not connected at TP1. In the direction of U7 the trace is still attached all the way to the through-hole at TP1.

I have repaired something simular to this on other projects with success, but this one makes me nervous .... I have alot of time and resources on this one. I am open and hope for some suggestions on how to fix this problem.

Anyone? Anyone? Please?

Dohn Smythe N8EWY
n8ewy@...

3567. Re: [AT_Sprint] new morse trainer for Mac OS

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-27 01:06:24 UTC
From: Stephen Wandling
Topic: 3565 Message: 3567

John,

Thanks for posting this. I have the G4FON software, but its on windoz
and while I have xp running on my iMac with Parallels, its cumbersome to
run it. I'm back into the hobby after a 50+ year break and my CW
copying ability is coming back, but I am sure it would benefit from
regular practice with a program such as this.

I installed the program, but it fails to open. The download from Source
Forge gives me a 1.9Mb dmg, and running that gives a 12.1Mb Disk image
that contains the .app file, but it doesn't run. I'm pretty surprised,
since application installations have been pretty bomb proof and this may
be the first failure I have had in the 2 years I've had the iMac.

I am copying AD5RX. Thanks Jonathan for bringing the G4FON idea to the Mac.

Thanks for the post John.

72,
Stephen
VE7NSD

john shadle wrote:
> Just wanted to give a heads up to those of you who use Mac OS (or know of
> folks who use Mac OS) about a new Morse Code learning device which is
> available for Mac OS.
>
> This program is called the AD5RX Morse Trainer and it may be downloaded
> *free* from the Source Forge site:
>
> http://sourceforge.net/projects/morsetrainer/
>
> Jonathan Nall, AD5RX, is a ham who lives out in 6-land these days. By day
> he works in the tech biz doing hardware verification, but he really enjoys
> tinkering around with other things in his spare time. In this case, he's
> offering a G4FON-like program for Mac users. It has quite a bit of
> functionality of the G4FON program (QRM, QSB, effective speed and actual
> speed settings, etc.). In addition to those basic features, it offers the
> ability to set the number of stations QRMing and the ability of the
> program to read the code back to you (in English) to check your written
> (or typed) transcription.
>
> The motivation behind developing this program (which he has poured many
> hours into) is to provide a quality, free Morse Code-learning program to
> Mac users who have been limited to pay-only or inferior programs in the
> past.

>
> The program will always remain free, but since the program is still in its
> infancy he is requesting that Mac hams download it and try it out. Please
> email all comments to ad5rx@.... He is specifically looking for
> comments related to the UI and the speech function (mentioned above).
>
> My interest in this is only that AD5RX is a friend of mine from college
> who happens to not subscribe to this list. That's all. I had nothing to do
> with the development of the program, personally.
>
> 73
> -john W4PAH
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>
>
>

3568. ATS3B Down

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-27 05:24:13 UTC
From: kc7fys
Topic: 3568 Message: 3568

My 3B has worked very well for basically a year now--but today I was on 14.040 sending CQ from M1 and suddenly while transmitting the everything stopped. The LED indicated 8. (all segments lit). I was operating with a reliable 11.5V, but the SWR was just 1.8-1.9. (This I discovered after the problem happened; my feedline shifted or something and it raised the SWR.) Anyway... where should I start troubleshooting? Upon powerup it still shows all LED segments lit, no response from paddle or buttons. Same response with other band modules. Where to begin checking?
Jonathan KC7FYS

3569. RE: [AT_Sprint] ATS3B Down

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-27 12:08:24 UTC
From: list2
Topic: 3568 Message: 3569

Hi Jonathan,
How about reloading the firmware. The loose RFI may have scrambled the code. I had to do that once.
Steve, W2MY

-----Original Message-----
From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com]On Behalf Of kc7fys
Sent: Saturday, September 27, 2008 12:24 AM
To: AT_Sprint@yahoogroups.com
Subject: [AT_Sprint] ATS3B Down

My 3B has worked very well for basically a year now--but today I was on 14.040 sending CQ from M1 and suddenly while transmitting the everything stopped. The LED indicated 8. (all segments lit). I was operating with a reliable 11.5V, but the SWR was just 1.8-1.9. (This I discovered after the problem happened; my feedline shifted or something and it raised the SWR.) Anyway... where should I start troubleshooting? Upon powerup it still shows all LED segments lit, no response from paddle or buttons. Same response with other band modules. Where to begin checking?
Jonathan KC7FYS

Yahoo! Groups Links

Internal Virus Database is out of date.
Checked by AVG - http://www.avg.com
Version: 8.0.138 / Virus Database: 270.7.0/1684 - Release Date: 9/22/2008 6:39 AM

3570. Re: [AT_Sprint] ATS3B Down

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-27 12:09:05 UTC
From: Vojtěch Bubník
Topic: 3568 Message: 3570

Hi Johnatan.

First of all, I would measure 5V and 3.5V stabilizers and the reset pin (7) of the controller. If 3.5V is still there and reset pin is high (1.5V or lower), then the PA FETs may be shortened.

If 3.5V is still there and reset pin is high (3.5V or so), then I would inspect the PCB for cracked joints, lifted IC legs etc. If that does not help, then you are probably in trouble and your controller may be in silicon heaven.

73, Vojtech AB2ZA

3571. Re: [AT_Sprint] ATS3B Down

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-27 12:12:11 UTC
From: J. Haynes
Topic: 3568 Message: 3571

I'll make those measurements. It's going on sacktime in JA. I.ll report in am.
Thanks, Jonathan

3572. 3-B easy Calibration question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-27 19:40:32 UTC
From: n8ewy
Topic: 3572 Message: 3572

On W1MT's ats3Calibration.html file, the "Prestep" says to Peak the IF transformer for peak noise.

Is the IF transformer the same component as the "trimmer cap" referred to in Step 1, the very next thing after the "Prestep"?

I know the trimmer cap is the green trimmer at CT1. Doesn't seem like the "IF Transformer" and the "trimmer cap" could be the same thing. Otherwise you'd be adjusting for peak noise and then turn around and move that adjustment in Step 1 to shape the filter.

So what's the difference between the two (what component is the IF transformer?) and if they are the same thing, how can you adjust it twice?

Dohn N8EWY

3573. Re: [AT_Sprint] 3-B easy Calibration question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-27 20:20:38 UTC
From: Michael Harnage
Topic: 3572 Message: 3573

There is no IF transformer for the 3B. The IF can is only on the 3.

-mike

--- On Sat, 9/27/08, n8ewy <n8ewy@...> wrote:

>
> Is the IF transformer the same component as the
> "trimmer cap" referred
> to in Step 1, the very next thing after the
> "Prestep"?
>

3574. RE: [AT_Sprint] 3-B easy Calibration question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-27 20:22:17 UTC
From: Dohn
Topic: 3572 Message: 3574

Thankyou. Sorry about the dumb question.

Dohn N8EWY

From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com] On Behalf Of Michael Harnage
Sent: Saturday, September 27, 2008 4:21 PM
To: AT_Sprint@yahoogroups.com
Subject: Re: [AT_Sprint] 3-B easy Calibration question

There is no IF transformer for the 3B. The IF can is only on the 3.

-mike

--- On Sat, 9/27/08, n8ewy <n8ewy@comcast. <mailto:n8ewy%40comcast.net> net> wrote:

>
> Is the IF transformer the same component as the
> "trimmer cap" referred
> to in Step 1, the very next thing after the
> "Prestep"?
>

3575. Something is still not quite right

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-27 22:56:13 UTC
From: n8ewy
Topic: 3575 Message: 3575

Well ..... all has went well. EXCEPT: When I did the initial Reference Oscillator Freq. Cal, it went perfect. When I achieved 10,000MHz, I hit menu and the sidetone shifted to the low tone. However, I have done that process again a few times and when I hit the menu button it changes tones but not nearly as low. I'm guessing 600 Hz or more (not really that
experienced) but much higher than the first time I clicked menu and it was just as described in the manual.

I tried adjusting the up/down buttons and went back to 10,000 MHz and it still never shifted to the low tone like the first time I did the procedure.

Is this right? Is it important since it did it right the first time?

Dohn N8EWY

3576. Troubleshooting "8."

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-28 00:22:53 UTC
From: Jonathan
Topic: 3576 Message: 3576

Vojtech,
Voltage on pin 7 of the controller is .87V. This is with the application of 9V and 3.49V and 5.01V out of the U9 and U10. (My VOM is an Akihabara cheepo, under 10$. But for these measurements it seems adequate.)
Am I correct then, that this indicates the strong possibility of blown 2N7000s?
Jonathan KC7FYS

3577. Re: [AT_Sprint] Troubleshooting "8."

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-28 01:01:52 UTC
From: Vojtěch Bubník
Topic: 3576 Message: 3577

> Voltage on pin 7 of the controller is .87V.

That means your device is kept in reset state. What voltage do you measure over R48? In RX state there shall be no current flowing into the finals so the voltage shall be zero. In that case the over current detector U12 shall be off and Q10 off also. If Q10 is on, then the over current detector is keeping your controller in reset state.

Just to verify this, you could try to remove R48 (0.1 ohm sense resistor) temporarily. If you blown the finals, at least the RX shall work when you disconnect the finals from the power supply.

In case the transceiver works now, then you need to solder wick the finals and replace them with fresh ones.

73, Vojtech

3578. Re: Troubleshooting "8."

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-28 06:29:10 UTC
From: kc7fys
Topic: 3576 Message: 3578

--- In AT_Sprint@yahoogroups.com, Vojtìch Bubník <bubnikv@...> wrote:
>
> > Voltage on pin 7 of the controller is .87V.
>
> That means your device is kept in reset state. What voltage do you
measure over R48?

8.63V with 9V in.

#In RX state there shall be no current flowing into the finals so the
#voltage shall be zero.

It reads 5V at the gate. I had half a dozen of the 2N7000 mosfets
here, so I installed them just now. That's not a problem now.

#In that case the over current detector U12 shall be off and Q10 off
#also. If Q10 is on, then the over current detector is keeping your
#controller in reset state.

> Just to verify this, you could try to remove R48 (0.1 ohm sense
resistor) temporarily. If you blown the finals, at least the RX shall
work when you disconnect the finals from the power supply.
>
> In case the transceiver works now, then you need to solder wick the
finals and replace them with fresh ones.

I'll go through and check voltages from Steve's chart. Is it possible,
as one other poster suggested--that I should simply re-install the
firmware? I am due for an upgrade anyway.
Thanks for your tips,
Jonathan KC7FYS

3579. Re: Troubleshooting "8."

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-28 13:06:18 UTC
From: kc7fys
Topic: 3576 Message: 3579

I did a few more checks on my 3B according to Steve's IC voltage Tables.

U1/U2 check out normally according to the IC Voltage tables on P26.
U5 also checks out.
U3 appears normal by the chart.
U4 has a single anomaly, OV on the P6 Control pin.
U6 is another story. Nearly every voltage is wrong.
1-0 (or .04)
2-4 OK
5, 6- 0V
7-.8V
8,9- .6V
10- 0V
11-18 .8V
19-20 .6V
21-23 .55V
24- 0
25-27 .05V
28- 0V

U7 is just as messed up as U6. Does this indicate a firmware corruption?

".8" is still lit on the LED. There is no audio output.
Hmm...
Jonathan KC7FYS

3580. Re: [AT_Sprint] Something is still not quite right

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-28 14:45:56 UTC
From: Stephen Wandling
Topic: 3575 Message: 3580

Dohn,

If I understand correctly, you are having the same problem that a few of us had with this portion of the calibration. What you have to do is do the calibration and then leave it as it is. Each time you go back to it you will find that the reference oscillator has reverted to the frequency before your first calibration. This doesn't mean that the reference oscillator was not still on the correct frequency after your first calibration, but rather that the process of checking the reference oscillator again always resets its frequency to some initial frequency.

Hope this help.

Stephen
VE7NSD

n8ewy wrote:
> Well ..... all has went well. EXCEPT: When I did the initial
> Reference Oscillator Freq. Cal, it went perfect. When I achieved
> 10,000MHz, I hit menu and the sidetone shifted to the low tone.
> However, I have done that process again a few times and when I hit the
> menu button it changes tones but not nearly as low. I'm guessing 600
> Hz or more (not really that
> experienced) but much higher than the first time I clicked menu and it
> was just as described in the manual.
>
> I tried adjusting the up/down buttons and went back to 10,000 MHz and
> it still never shifted to the low tone like the first time I did the
> procedure.
>
> Is this right? Is it important since it did it right the first time?
>
> Dohn N8EWY
>
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>
>
>

3581. RE: [AT_Sprint] 3-B easy Calibration question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-28 17:01:02 UTC
From: Dale Putnam
Topic: 3572 Message: 3581

Not a dumb question! It can't be a dumb question, unless you already know the answer... and as age creeps up,..... and remember it.. must be added. --... ...--Dale - WC7S in Wy

To: AT_Sprint@yahoogroups.comFrom: n8ewy@comcast.netDate: Sat, 27 Sep 2008 16:22:17 -0400Subject: RE: [AT_Sprint] 3-B easy Calibration question

Thankyou. Sorry about the dumb question.

Dohn N8EWY

From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com] On Behalf Of Michael HarnageSent: Saturday, September 27, 2008 4:21 PMTo: AT_Sprint@yahoogroups.comSubject: Re: [AT_Sprint] 3-B easy Calibration question

There is no IF transformer for the 3B. The IF can is only on the 3.-mike--- On Sat, 9/27/08, n8ewy <n8ewy@...> wrote:> > Is the IF transformer the same component as the> "trimmer cap" referred > to in Step 1, the very next thing after the> "Prestep"?>

_____
Stay up to date on your PC, the Web, and your mobile phone with Windows Live.
http://clk.atdmt.com/MRT/go/msnnkwxp1020093185mrt/direct/01/

3582. RE: [AT_Sprint] Something is still not quite right

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-28 18:09:18 UTC
From: Dohn
Topic: 3575 Message: 3582

Stephen,

Thanks for the response. So what you're saying is leave it alone? Move on to the next step? That was my initial thought. It went so smooth the first time. On that subject:

I have a decent volt/ohm meter, a bench frequency counter, spectroscope and a RF probe to get the job done. It looks like there isn't much I can do in the "Local Oscillator frequency trim" on page 24 without an O'scope. I peaked CT1 using spectroscope with a marker at 600Hz. I guess what I did was center the filter shape on 600 Hz. Is that the same as what it said to do in the manual? "Adjust the green BFO trimmer cap, Ct1, and peak the audio signal at the headphone jack"?

Have I missed anything as far as calibration goes, considering the equipment I have? If not, then I guess I can move on to Band filter adjustments right?

Dohn N8EWY

From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com] On Behalf Of Stephen Wandling
Sent: Sunday, September 28, 2008 10:46 AM
To: AT_Sprint@yahoogroups.com
Subject: Re: [AT_Sprint] Something is still not quite right

Dohn,

If I understand correctly, you are having the same problem that a few of us had with this portion of the calibration. What you have to do is do the calibration and then leave it as it is. Each time you go back to it you will find that the reference oscillator has reverted to the frequency before your first calibration. This doesn't mean that the reference oscillator was not still on the correct frequency after your first calibration, but rather that the process of checking the reference oscillator again always resets its frequency to some initial frequency.

Hope this help.

Stephen
VE7NSD

n8ewy wrote:
> Well ..... all has went well. EXCEPT: When I did the initial
> Reference Oscillator Freq. Cal, it went perfect. When I achieved
> 10,000MHz, I hit menu and the sidetone shifted to the low tone.

> However, I have done that process again a few times and when I hit the
> menu button it changes tones but not nearly as low. I'm guessing 600
> Hz or more (not really that
> experienced) but much higher than the first time I clicked menu and it
> was just as described in the manual.
>
> I tried adjusting the up/down buttons and went back to 10,000 MHz and
> it still never shifted to the low tone like the first time I did the
> procedure.
>
> Is this right? Is it important since it did it right the first time?
>
> Dohn N8EWY
>
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>
>
>

3583. Re: new morse trainer for Mac OS

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-28 19:27:44 UTC
From: jer terez
Topic: 3565 Message: 3583

what we really need is something like rufz for the mac

my 1.78 bits worth
72
jerry aa1of

3584. 20 meter output

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-28 19:49:10 UTC
From: n8ewy
Topic: 3584 Message: 3584

I can't seem to get the power below 3.0 watts on 20. I'm using a fresh 9.0 volt battery. I fooled with changing the spacing and the turn count is correct.

Is this a problem??

Dohn N8EWY

3585. Re: [AT_Sprint] 20 meter output

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-28 20:57:17 UTC
From: Stephen Wandling
Topic: 3584 Message: 3585

Dohn,

If you are using the small 9 V battery such as those used in a smoke
detector, it appears that they are unsuitable for this rig. I did make
a couple of contacts with one, but they are not recommended.

I am wondering why you are trying to get the power below 3 watts? What
are you using to measure your power output? What power out are you reading?

72
Stephen
VE7NSD

n8ewy wrote:
> I can't seem to get the power below 3.0 watts on 20. I'm using a fresh
> 9.0 volt battery. I fooled with changing the spacing and the turn
> count is correct.
>
> Is this a problem??
>
> Dohn N8EWY
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>
>
>

3586. RE: [AT_Sprint] Re: Troubleshooting "8."

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-28 21:17:50 UTC
From: Ken Lotts
Topic: 3576 Message: 3586

Just a wild shot at something easy to look at...
check that none of your momentary switches have failed (shorted)

Ken aa7jc

-----Original Message-----
From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com]On
Behalf Of kc7fys
Sent: Sunday, September 28, 2008 6:06 AM
To: AT_Sprint@yahoogroups.com
Subject: [AT_Sprint] Re: Troubleshooting "8."

I did a few more checks on my 3B according to Steve's IC voltage Tables.

U1/U2 check out normally according to the IC Voltage tables on P26.
U5 also checks out.
U3 appears normal by the chart.
U4 has a single anomaly, OV on the P6 Control pin.
U6 is another story. Nearly every voltage is wrong.
1-0 (or .04)
2-4 OK
5, 6- 0V
7-.8V
8,9- .6V
10- 0V
11-18 .8V
19-20 .6V
21-23 .55V
24- 0
25-27 .05V
28- 0V

U7 is just as messed up as U6. Does this indicate a firmware corruption?

".8" is still lit on the LED. There is no audio output.
Hmm...
Jonathan KC7FYS

3587. RE: [AT_Sprint] 20 meter output

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-28 21:17:35 UTC
From: Dohn
Topic: 3584 Message: 3587

I was going according to the adjustments called for on Pg 24 of the 3-B manual. I'm pretty darned happy. I am using a newer MFJ-872 SWR/Watt meter set to the 5 watt range. I have all of the band boards right there between 2.5 and 3.0 watts with a 9.0 volt battery. I don't have a good bench power supply yet. Next on list. I just kept a fresh Energizer all the way through this process.

Most of the boards didn't need much in the line of adjustment all the way through. Once I've got her completed I'm planning on going back and change out some caps and stuff to squeeze some more out of her. I'm just not that experienced yet. With the lack of test equipment, my hands are a bit tied. I have a great feeling about this rig so far.

My K2 and K1 taught me a lot and I've been able to put that small bit of knowledge to use. I can't tell you how much it means that you have replied. I haven't had a great deal of reinforcement this project. I'd give my left leg for a mentor in my area for some help in theory and test equipment usage. I catch on quickly, but I have to sort of see it once to absorb and gain good understanding.

I'm on my way out in about an hour or so to see the "Gibson Brothers", a very good banjo and string combo in a small excellent venue. There are just a couple other things as important as getting a handle on this love of QRP I've got.

Dohn N8EWY

From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com] On Behalf Of Stephen Wandling
Sent: Sunday, September 28, 2008 4:57 PM
To: AT_Sprint@yahoogroups.com
Subject: Re: [AT_Sprint] 20 meter output

Dohn,

If you are using the small 9 V battery such as those used in a smoke detector, it appears that they are unsuitable for this rig. I did make a couple of contacts with one, but they are not recommended.

I am wondering why you are trying to get the power below 3 watts? What are you using to measure your power output? What power out are you reading?

72
Stephen
VE7NSD

n8ewy wrote:
> I can't seem to get the power below 3.0 watts on 20. I'm using a fresh
> 9.0 volt battery. I fooled with changing the spacing and the turn
> count is correct.
>
> Is this a problem??
>
> Dohn N8EWY
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>
>
>

3588. QBSA Question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-28 21:20:22 UTC
From: n8ewy
Topic: 3588 Message: 3588

Anybody know if the QBSA unit is still available? If not, any idea on where one would get one. I would really like to get my hands on one of them!

Dohn N8EWY

3589. Re: [AT_Sprint] 20 meter output

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-28 21:26:17 UTC
From: Stephen Wandling
Topic: 3584 Message: 3589

I haven't put any effort into tuning my modules because I do not yet have my 'optimum' battery pack. Knowing that the rig does not do well over 12 V, I may just end up with an 11.1 V LiPo pack. My concern was peaking the filters on a low voltage and then doing damage when I started using my higher voltage source. It may not be a realistic concern, but its mine!

72,
Stephen
VE7NSD

Dohn wrote:
>
> I was going according to the adjustments called for on Pg 24 of the
> 3-B manual. I?m pretty darned happy. I am using a newer MFJ-872
> SWR/Watt meter set to the 5 watt range. I have all of the band boards
> right there between 2.5 and 3.0 watts with a 9.0 volt battery. I don?t
> have a good bench power supply yet. Next on list. I just kept a fresh
> Energizer all the way through this process.
>
> Most of the boards didn?t need much in the line of adjustment all the
> way through. Once I?ve got her completed I?m planning on going back
> and change out some caps and stuff to squeeze some more out of her.
> I?m just not that experienced yet. With the lack of test equipment, my
> hands are a bit tied. I have a great feeling about this rig so far.
>
> My K2 and K1 taught me a lot and I?ve been able to put that small bit
> of knowledge to use. I can?t tell you how much it means that you have
> replied. I haven?t had a great deal of reinforcement this project. I?d
> give my left leg for a mentor in my area for some help in theory and
> test equipment usage. I catch on quickly, but I have to sort of see it
> once to absorb and gain good understanding.
>
> I?m on my way out in about an hour or so to see the ?Gibson Brothers?,
> a very good banjo and string combo in a small excellent venue. There
> are just a couple other things as important as getting a handle on
> this love of QRP I?ve got.
>
> Dohn N8EWY
>
> ---
>
> *From:* AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com]
> *On Behalf Of *Stephen Wandling
> *Sent:* Sunday, September 28, 2008 4:57 PM

> *To:* AT_Sprint@yahoogroups.com
> *Subject:* Re: [AT_Sprint] 20 meter output
>
> Dohn,
>
> If you are using the small 9 V battery such as those used in a smoke
> detector, it appears that they are unsuitable for this rig. I did make
> a couple of contacts with one, but they are not recommended.
>
> I am wondering why you are trying to get the power below 3 watts? What
> are you using to measure your power output? What power out are you
> reading?
>
> 72
> Stephen
> VE7NSD
>
> n8ewy wrote:
> > I can't seem to get the power below 3.0 watts on 20. I'm using a fresh
> > 9.0 volt battery. I fooled with changing the spacing and the turn
> > count is correct.
> >
> > Is this a problem??
> >
> > Dohn N8EWY
> >
> >
> > ------------------------------------
> >
> > Yahoo! Groups Links
> >
> >
> >
> >
> >
>
>

3590. Re: [AT_Sprint] Re: new morse trainer for Mac OS

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-28 21:29:46 UTC
From: Stephen Wandling
Topic: 3565 Message: 3590

I have to admit that the G4FON type software does not provide 800 wpm
code to be copied. After listening to PARIS at 100 wpm I can see why.
I suspect solid copying of 25 or 30 wpm would satisfy many, if not most,
hams.

72
Stephen
VE7NSD

jer terez wrote:
> what we really need is something like rufz for the mac
>
> my 1.78 bits worth
> 72
> jerry aa1of
>
>
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>
>
>
>

3591. Re: Troubleshooting "8."

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-28 21:42:36 UTC
From: kc7fys
Topic: 3576 Message: 3591

--- In AT_Sprint@yahoogroups.com, "Ken Lotts" <ken@...> wrote:
>
> Just a wild shot at something easy to look at...
> check that none of your momentary switches have failed (shorted)
>
> Ken aa7jc

I'll do that today. The rig was sitting on my bench transmitting into a poor SWR when it happened--so I'm suspecting that the guy who said my firmware was zapped by stray RF. I'm going to upload the new W1MT firmware this morning. See if that works.
Thanks for the tip.
Jonathan

3592. Re: Troubleshooting "8."

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-28 22:17:08 UTC
From: querencias
Topic: 3576 Message: 3592

Jonathan,

Because the RST/ (reset NOT, active low) is always low and VCC appears to be normal, you should probably look at Q10 , R49 and U12. RST NOT always low explains most of the other measurements you listed, including U7 and U4.

I tried to find specs for U12 but have failed - it appears to be some sort of over-current protection -

if Q10 is always conducting then RST NOT will always be low. Maybe Q10 has a short between Collector and Emitter - doubt that the MPU has been injured nor the Flash Memory.

Best of luck

72 de KT6L Grant

--- In AT_Sprint@yahoogroups.com, "Ken Lotts" <ken@...> wrote:
>
> Just a wild shot at something easy to look at...
> check that none of your momentary switches have failed (shorted)
>

> I did a few more checks on my 3B according to Steve's IC voltage Tables.
>
> U1/U2 check out normally according to the IC Voltage tables on P26.
> U5 also checks out.
> U3 appears normal by the chart.
> U4 has a single anomaly, OV on the P6 Control pin.
> U6 is another story. Nearly every voltage is wrong.
> 1-0 (or .04)
> 2-4 OK
> 5, 6- 0V
> 7-.8V
> 8,9- .6V
> 10- 0V
> 11-18 .8V
> 19-20 .6V
> 21-23 .55V
> 24- 0
> 25-27 .05V
> 28- 0V

3593. RE: [AT_Sprint] 20 meter output

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-29 01:33:21 UTC
From: Dale Putnam
Topic: 3584 Message: 3593

Way to go Dohn, lot of fun, and learning going on there, I can tell.
You are well on the way to a good foundation of knowledge.. or maybe that is really the second or even third floor work.
Congrats!--... ...--Dale - WC7S in Wy

To: AT_Sprint@yahoogroups.comFrom: n8ewy@...: Sun, 28 Sep 2008 17:17:35 -0400Subject: RE: [AT_Sprint] 20 meter output

I was going according to the adjustments called for on Pg 24 of the 3-B manual. I'm pretty darned happy. I am using a newer MFJ-872 SWR/Watt meter set to the 5 watt range. I have all of the band boards right there between 2.5 and 3.0 watts with a 9.0 volt battery. I don't have a good bench power supply yet. Next on list. I just kept a fresh Energizer all the way through this process.

Most of the boards didn't need much in the line of adjustment all the way through. Once I've got her completed I'm planning on going back and change out some caps and stuff to squeeze some more out of her. I'm just not that experienced yet. With the lack of test equipment, my hands are a bit tied. I have a great feeling about this rig so far.

My K2 and K1 taught me a lot and I've been able to put that small bit of knowledge to use. I can't tell you how much it means that you have replied. I haven't had a great deal of reinforcement this project. I'd give my left leg for a mentor in my area for some help in theory and test equipment usage. I catch on quickly, but I have to sort of see it once to absorb and gain good understanding.

I'm on my way out in about an hour or so to see the "Gibson Brothers", a very good banjo and string combo in a small excellent venue. There are just a couple other things as important as getting a handle on this love of QRP I've got.

Dohn N8EWY

From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com] On Behalf Of Stephen WandlingSent: Sunday, September 28, 2008 4:57 PMTo: AT_Sprint@yahoogroups.comSubject: Re: [AT_Sprint] 20 meter output

Dohn,If you are using the small 9 V battery such as those used in a smoke detector, it appears that they are unsuitable for this rig. I did make a couple of contacts with one, but they are not recommended.I am wondering why you are trying to get the power below 3 watts? What are you using to measure your power output? What power out are you reading?72StephenVE7NSDn8ewy wrote:> I can't seem to get the power below 3.0 watts on 20. I'm using a fresh > 9.0 volt battery. I fooled with changing the spacing and the turn > count is correct.>> Is this a problem??>> Dohn N8EWY>>>
------------------------------------>> Yahoo! Groups Links>>>>>

_____
Get more out of the Web. Learn 10 hidden secrets of Windows Live.
http://windowslive.com/connect/post/jamiethomson.spaces.live.com-Blog-cns!550F681DAD532637

!5295.entry?ocid=TXT_TAGLM_WL_domore_092008

3594. Re: [AT_Sprint] Re: Troubleshooting "8."

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-29 02:02:37 UTC
From: Vojtěch Bubník
Topic: 3576 Message: 3594

Hi Johnatan.

To which version of the schematic do you refer? I looked into the files posted to AT_spring group and I did not find any U4 and U6.

Vojtech

> ------------ Původní zpráva ------------
> Od: kc7fys <kc7fys@...>
> Předmět: [AT_Sprint] Re: Troubleshooting "8."
> Datum: 28.9.2008 15:06:41
> --
> I did a few more checks on my 3B according to Steve's IC voltage Tables.
>
> U1/U2 check out normally according to the IC Voltage tables on P26.
> U5 also checks out.
> U3 appears normal by the chart.
> U4 has a single anomaly, OV on the P6 Control pin.
> U6 is another story. Nearly every voltage is wrong.
> 1-0 (or .04)
> 2-4 OK
> 5, 6- 0V
> 7-.8V
> 8,9- .6V
> 10- 0V
> 11-18 .8V
> 19-20 .6V
> 21-23 .55V
> 24- 0
> 25-27 .05V
> 28- 0V
>
> U7 is just as messed up as U6. Does this indicate a firmware corruption?
>
> ".8" is still lit on the LED. There is no audio output.
> Hmm...
> Jonathan KC7FYS
>
>
>
>
>

3595. Re: [AT_Sprint] Re: Troubleshooting "8."

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-29 02:08:03 UTC
From: Vojtěch Bubník
Topic: 3576 Message: 3595

> I tried to find specs for U12 but have failed - it appears to be some sort of
> over-current
> protection -

http://www.zetex.com/salestoolkit/knowhow/guides/pdf/ZXCT1008_knowhow_V2.pdf

The chip basically translates voltage over the sense resistor to a current to ground.
Iout = Vsense * 10000

73, Vojtech OK1IAK

3596. Re: Troubleshooting "8."

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-29 04:49:39 UTC
From: kc7fys
Topic: 3576 Message: 3596

On p26 of the Sept 10, 2007 version of the instructions, I have a chart labeled IC Voltage Tables with some values written. "U6 MPS430 MPU" and "U4 Analog SPDT Switch" are the two I am referring to.
Thanks for your comments, Vojtech. I'm still poking around and measuring to find the problem with this board. It happened without any mechanical bump or impact--during XMT, so it's probably related to that part of the rig.
Jonathan

--- In AT_Sprint@yahoogroups.com, Vojtìch Bubník <bubnikv@...> wrote:
>
> Hi Johnatan.
>
> To which version of the schematic do you refer? I looked into the files posted to AT_spring group and I did not find any U4 and U6.
>
> Vojtech
>
> > ------------ Pùvodní zpráva ------------
> > Od: kc7fys <kc7fys@...>
> > Pøedmìt: [AT_Sprint] Re: Troubleshooting "8."
> > Datum: 28.9.2008 15:06:41
> > ---------------------------------------
> > I did a few more checks on my 3B according to Steve's IC voltage Tables.
> >
> > U1/U2 check out normally according to the IC Voltage tables on P26.
> > U5 also checks out.
> > U3 appears normal by the chart.
> > U4 has a single anomaly, OV on the P6 Control pin.
> > U6 is another story. Nearly every voltage is wrong.
> > 1-0 (or .04)
> > 2-4 OK
> > 5, 6- 0V
> > 7-.8V
> > 8,9- .6V
> > 10- 0V
> > 11-18 .8V
> > 19-20 .6V
> > 21-23 .55V
> > 24- 0
> > 25-27 .05V
> > 28- 0V
> >
> > U7 is just as messed up as U6. Does this indicate a firmware

corruption?
> >
> > ".8" is still lit on the LED. There is no audio output.
> > Hmm...
> > Jonathan KC7FYS
> >
> >
> >
> >
> >
>

3597. Re: Troubleshooting "8."

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-29 05:15:10 UTC
From: kc7fys
Topic: 3576 Message: 3597

I'm guessing this is a known issue--is Q10 mis-printed on the PCB as Q5? I'm suspecting that's the one by where it is.
What voltages should I see on Q10? How's this one checked? Do I desolder it to do so?
Jonathan

--- In AT_Sprint@yahoogroups.com, "querencias" <tuquerencia@...> wrote:
>
> Jonathan,
>
> Because the RST/ (reset NOT, active low) is always low and VCC appears to be normal, you
> should probably look at Q10 , R49 and U12. RST NOT always low explains most of the
> other measurements you listed, including U7 and U4.
>
> I tried to find specs for U12 but have failed - it appears to be some sort of over-current
> protection -
>
> if Q10 is always conducting then RST NOT will always be low. Maybe Q10 has a short
> between Collector and Emitter - doubt that the MPU has been injured nor the Flash
> Memory.
>
> Best of luck
>
> 72 de KT6L Grant
>
> --- In AT_Sprint@yahoogroups.com, "Ken Lotts" <ken@> wrote:
> >
> > Just a wild shot at something easy to look at...
> > check that none of your momentary switches have failed (shorted)
> >
>
> > I did a few more checks on my 3B according to Steve's IC voltage Tables.
> >
> > U1/U2 check out normally according to the IC Voltage tables on P26.
> > U5 also checks out.
> > U3 appears normal by the chart.
> > U4 has a single anomaly, OV on the P6 Control pin.
> > U6 is another story. Nearly every voltage is wrong.
> > 1-0 (or .04)

> > 2-4 OK
> > 5, 6- 0V
> > 7-.8V
> > 8,9- .6V
> > 10- 0V
> > 11-18 .8V
> > 19-20 .6V
> > 21-23 .55V
> > 24- 0
> > 25-27 .05V
> > 28- 0V
>

3598. Re: [AT_Sprint] Re: Troubleshooting "8."

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-29 05:23:17 UTC
From: Vojtěch Bubník
Topic: 3576 Message: 3598

Hi Johnatan.

If the pin 7 (reset) of MSP430 controller is kept down by over current protect circuit, than it is perfectly OK that the DDS control lines and analog switch control line read different voltages than they should be.

You told me that:
5V and 3.5V stabilizers are OK
Controller is in reset state.
Pin 24 of the controller is at 0V. This pin is controlling the finals, therefore the finals shall not be powered.
Voltage over R48 (over current sense resistor) is 8.63V with 9V in.

The reset state may be caused by messed up firmware, but it may be a hardware problem as well. The voltage over R48 you indicate is very high. The resistor R48 has resistance 0.1Ohm. Voltage of 8.64V divided by 0.1 Ohm indicates 86.4A! This is not feasible. You either did not measure voltage across R48, or R48 is not soldered correctly. The voltage accross R48 shall read zero if in RX mode and 0.05V if in TX mode and 0.5A is flowing into finals. Would you please read voltage across R48?

Is any of the transistors hot (Q5, Q7-Q9), if you connect the battery? Would you measure current flowing into your TRX?

73, Vojtech

3599. Re: Troubleshooting "8."

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-29 06:16:48 UTC
From: kc7fys
Topic: 3576 Message: 3599

--- In AT_Sprint@yahoogroups.com, Vojtìch Bubník <bubnikv@...> wrote:
>
> Hi Johnatan.
> Is any of the transistors hot (Q5, Q7-Q9), if you connect the
battery? Would you measure current flowing into your TRX?
>
> 73, Vojtech

Just to be explicit about what I'm doing here. VOM set on 200m I get a
reading of 62.5mA current draw in RX. (I call it RX, but I don't
actually know WHAT state the rig is in, as I see only the "8." on the
LED and no audio hiss or output that I can see.
Jonathan

3600. Re: Troubleshooting "8."

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-29 06:32:41 UTC
From: querencias
Topic: 3576 Message: 3600

Jonathan,

I now have the lastest schematic,, "Rev. 1 9/15/07" which identifies what I was calling Q10 as Q5 (consistent with the parts list, Blue MMBT2222), and the transistor labeled Q5 is now labeled Q6, giving a total of 9 transistors.

I think the problem is not in the firmware but either in U11, U12, or Q5, or even possibly in Q6.

The voltage on the base of Q5 should be less than 0.6 VDC or Q5 will conduct and drop the voltage on pin 7 (RST_NOT) of U6 and hold the MPU in reset.

As Voljtek mentioned you need to measure the voltage across R48 which should be VERY low as Q6 should be cutoff and there should be a very low current. Look also at the voltage on the drain of Q6 which should be
zero since it should be cut-off. If it's not close to zero then it must be shorted between the source and drain.

If Q6 is OK then the problem has to be very close to U12 or Q5. If not in U12 or Q5 then it must be U11.

all the best,

Grant

--- In AT_Sprint@yahoogroups.com, "kc7fys" <kc7fys@...> wrote:
>
> I'm guessing this is a known issue--is Q10 mis-printed on the PCB as
> Q5? I'm suspecting that's the one by where it is.
> What voltages should I see on Q10? How's this one checked? Do I
> desolder it to do so?
> Jonathan
>
> --- In AT_Sprint@yahoogroups.com, "querencias" <tuquerencia@> wrote:
> >
> > Jonathan,
> >
> > Because the RST/ (reset NOT, active low) is always low and VCC
> appears to be normal, you
> > should probably look at Q10 , R49 and U12. RST NOT always low
> explains most of the
> > other measurements you listed, including U7 and U4.
> >
> > I tried to find specs for U12 but have failed - it appears to be
> some sort of over-current
> > protection -
> >

> > if Q10 is always conducting then RST NOT will always be low. Maybe
> Q10 has a short
> > between Collector and Emitter - doubt that the MPU has been injured
> nor the Flash
> > Memory.
> >
> > Best of luck
> >
> > 72 de KT6L Grant
> >
> > --- In AT_Sprint@yahoogroups.com, "Ken Lotts" <ken@> wrote:
> > >
> > > Just a wild shot at something easy to look at...
> > > check that none of your momentary switches have failed (shorted)
> > >
> >
> > > I did a few more checks on my 3B according to Steve's IC voltage
> Tables.
> > >
> > > U1/U2 check out normally according to the IC Voltage tables on P26.
> > > U5 also checks out.
> > > U3 appears normal by the chart.
> > > U4 has a single anomaly, OV on the P6 Control pin.
> > > U6 is another story. Nearly every voltage is wrong.
> > > 1-0 (or .04)
> > > 2-4 OK
> > > 5, 6- 0V
> > > 7-.8V
> > > 8,9- .6V
> > > 10- 0V
> > > 11-18 .8V
> > > 19-20 .6V
> > > 21-23 .55V
> > > 24- 0
> > > 25-27 .05V
> > > 28- 0V
> >
>

3601. Re: Troubleshooting "8."

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-29 06:33:02 UTC
From: kc7fys
Topic: 3576 Message: 3601

Voltage across R48 is 0.0.
I was not measuring it ACROSS the resistor R48. Voltage from either side of the resistor to ground.

What should I see on each tab of U12?
Jonathan

3602. Re: Troubleshooting "8."

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-29 06:37:52 UTC
From: querencias
Topic: 3576 Message: 3602

voltages on pins 1,2 should be V+, and probably zero on pin 3

can you see any voltage on the base of Q5?

--- In AT_Sprint@yahoogroups.com, "kc7fys" <kc7fys@...> wrote:
>
> Voltage across R48 is 0.0.
> I was not measuring it ACROSS the resistor R48. Voltage from either
> side of the resistor to ground.
>
> What should I see on each tab of U12?
> Jonathan
>

3603. Re: Troubleshooting "8."

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-29 07:04:35 UTC
From: kc7fys
Topic: 3576 Message: 3603

--- In AT_Sprint@yahoogroups.com, "querencias" <tuquerencia@...> wrote:
>
> voltages on pins 1,2 should be V+, and probably zero on pin 3
>
> can you see any voltage on the base of Q5?

No voltage on the base of Q5. .79V on the collector and emitter of
that one.

Q6 shows:
7.9V on the Gate
0V on the Drain
8.7V on the Source

Jonathan

3604. Re: Troubleshooting "8."

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-29 07:14:54 UTC
From: querencias
Topic: 3576 Message: 3604

Voltages sound good on Q6 - I was wrong - the Gate should have a positive voltage as Q4 is shut-off.

And the Q5 collector and base sound good, but the voltage should be zero on the emitter as it's tied directly to ground...

check the emitter again.

starting to sound like U11 is a suspect

by the way just saw your youtube touch keyer video - where can one find the specs/directions on building the touch keyer?

grant/kt6l

--- In AT_Sprint@yahoogroups.com, "kc7fys" <kc7fys@...> wrote:
>
> --- In AT_Sprint@yahoogroups.com, "querencias" <tuquerencia@> wrote:
> >
> > voltages on pins 1,2 should be V+, and probably zero on pin 3
> >
> > can you see any voltage on the base of Q5?
>
> No voltage on the base of Q5. .79V on the collector and emitter of
> that one.
>
> Q6 shows:
> 7.9V on the Gate
> 0V on the Drain
> 8.7V on the Source
>
> Jonathan
>

3605. Re: Troubleshooting "8."

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-29 07:25:10 UTC
From: kc7fys
Topic: 3576 Message: 3605

> And the Q5 collector and base sound good, but the voltage should be zero on the emitter
> as it's tied directly to ground...
>
> check the emitter again.

That's what I'll do now. I'm also gearing up to reload the firmware. I don't think it'll hurt to take that variable out of the mix here.

> by the way just saw your youtube touch keyer video - where can one find the
> specs/directions on building the touch keyer?

Grant, I'm between kit-building and actual homebrewing of my own projects and ideas. Very much closer to being just a kit builder, however--and as such, I am 'emerging' in my knowledge of what's going on in the circuits I solder together. So, all this troubleshooting is a classroom experience for me.

About the touchkeyer--I'm proud of that installation (and the video, which got hundreds of views in all kinds of countries), because it works! I do not deserve any credit, however, for anything more than soldering together the KIT. He he. I fall somewhere between the craftsy "Make Magazine" bunch, and the "EMRFD" crew. I do, by the way, OWN Experimental Methods, but am still reading Frank W. Harris, KØIYE's "Crystal Sets To Sideband." I'm trying to fill in all the fundamentals that I lack as I do actual soldering and troubleshooting that's over my head.

On this ATS list, I am very much a 'junior' member in terms of engineering knowledge. Still, this kind of troubleshooting benefits me a lot. In the background I'm Wiki'ing all the components, looking at data sheets just to see which each tab is--all that basic stuff.

Back to the matter at hand. Emitter on Q5. Stand by.
Jonathan KC7FYS

3606. Re: Troubleshooting "8." (firmware, Q5)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-29 07:29:13 UTC
From: kc7fys
Topic: 3576 Message: 3606

--- In AT_Sprint@yahoogroups.com, "kc7fys" <kc7fys@...> wrote:
>
>
> > And the Q5 collector and base sound good, but the voltage should be
> zero on the emitter
> > as it's tied directly to ground...
> >
> > check the emitter again.

It's also 0.0V.
Again, there is 0 on the base and .79V on the collector with what
measures as 9.02V in.
I'm going to flash the firmware now. I have an old Win98 machine that
I have to crank up to do that, and it's never quite like the
instructions say it's supposed to be.
KC7FYS Jonathan

3607. Re: Troubleshooting "8." (firmware, Q5)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-29 07:35:43 UTC
From: querencias
Topic: 3576 Message: 3607

good luck with the reload - hope that does the trick -if it doesn't then strongly suspect U11

getting late here - good luck

72 de KT6L

--- In AT_Sprint@yahoogroups.com, "kc7fys" <kc7fys@...> wrote:
> It's also 0.0V.
> Again, there is 0 on the base and .79V on the collector with what
> measures as 9.02V in.
> I'm going to flash the firmware now. I have an old Win98 machine that
> I have to crank up to do that, and it's never quite like the
> instructions say it's supposed to be.
> KC7FYS Jonathan
>

3608. Re: [AT_Sprint] Re: Troubleshooting "8."

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-29 11:48:11 UTC
From: Vojtěch Bubník
Topic: 3576 Message: 3608

Hi Johnatan.

Your controller is kept in reset state and it does not seem to me that flashing the chip will change your situation. The pin 7 of MSP430 is reset input only pin and is kept at 0.8V by external circuit.

If Q5's base is tied to ground, than Q5 (MMBT2222) is supposed to be closed and is most probably not causing the reset state.

It is very hard to guess now what is wrong with your device. The pin 7 of MSP430 shall be pulled high by the reset supervisor chip U11 and may be pulled low by Q5 if current flowing into finals is too high. If it is pulled down by controller, then the controller is faulty.

At this point of time I could only recommend you to desolder parts that may keep reset (pin 7 of MSP430) low. That may be U11 (MCP120T-3151) or Q5 (MMBT2222). After you desolder U11, R43 will still pull reset pin high. If you still measure pin 7 low, then you may desolder Q5. If the pin 7 of MSP430 is still low, then the controller is most probably dead.

A piece of advice how to desolder a part. It works for me to instead of sucking the solder away to actually add an abundance of solder over all pads of the parts. After all pads of a part are melted, I just push the part away with the tip of soldering iron. The capillar action is keeping the solder blob with the part on the tip. Then just shake off the part on the table and remove the solder from it. Use solder wick to clean the board.

73, Vojtech OK1IAK

3609. Re: Troubleshooting "8."

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-29 15:27:08 UTC
From: querencias
Topic: 3576 Message: 3609

Also you may not be able to change the firmware while pin 7/MPU is held low - I noticed that it's involved with the external programmer connector

72 Grant

--- In AT_Sprint@yahoogroups.com, Vojtìch Bubník <bubnikv@...> wrote:
>
> Hi Johnatan.
>
> Your controller is kept in reset state and it does not seem to me that flashing the chip will change your situation. The pin 7 of MSP430 is reset input only pin and is kept at 0.8V by external circuit.
>
> If Q5's base is tied to ground, than Q5 (MMBT2222) is supposed to be closed and is most probably not causing the reset state.
>
> It is very hard to guess now what is wrong with your device. The pin 7 of MSP430 shall be pulled high by the reset supervisor chip U11 and may be pulled low by Q5 if current flowing into finals is too high. If it is pulled down by controller, then the controller is faulty.
>
> At this point of time I could only recommend you to desolder parts that may keep reset (pin 7 of MSP430) low. That may be U11 (MCP120T-3151) or Q5 (MMBT2222). After you desolder U11, R43 will still pull reset pin high. If you still measure pin 7 low, then you may
desolder Q5. If the pin 7 of MSP430 is still low, then the controller is most probably dead.
>
> A piece of advice how to desolder a part. It works for me to instead of sucking the solder away to actually add an abundance of solder over all pads of the parts. After all pads of a part are melted, I just push the part away with the tip of soldering iron. The capillar action is keeping the solder blob with the part on the tip. Then just shake off the
part on the table and remove the solder from it. Use solder wick to clean the board.
>
> 73, Vojtech OK1IAK
>

3610. Re:[AT_Sprint] Re: Troubleshooting "8."

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-29 15:30:55 UTC
From: J. Haynes
Topic: 3576 Message: 3610

That is consistent with my experience today. I found myself unable to flash Mike's v.8.
Come morning, I'll desolder as per Vojtech and report.
Jonathan

3611. Troubleshooting Reset State

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-30 01:23:09 UTC
From: Jonathan
Topic: 3611 Message: 3611

Vojtech and others who've given advice,
I desoldered U11 first--no change to .8V on Pin 7 of U6.
I then desoldered Q5--again virtually no change to Pin 7's voltage. (.75V).

What would the obvious things to check before concluding I've damaged the MPU U6? Although spontaneous solder joint failure is less likely I've given the board the once-over; inspected the board itself, connections, components physically. Somebody mentioned the switches, which appear to work as usual. I've checked and re-checked that the input voltage is 9V +/- a percent or so. (Alinco DV 33MV power supply, and an AA battery pack used alternately). I've gone over Steve's voltages chart in the manual and found the MPU to be off--or as interpreted by Vojtech to be in RESET state.

All LED segments are still lit with no hiss or signal from the audio output.

I removed my touchkeyer unit just to make sure there was no possible interaction that might be causing this.

I used hot air, which I find easiest for removing components. I fashioned a heat-focussing nozzle from a kitchen funnel and some kung-fu with a Dremel.
http://www.flickr.com/photos/jonathancharles/2900740972/

Before I seek replacement of U6, what should I check? It always seems to be something extremely obvious--but in this case, it appears to be an actual component failure from my transmitting into a not-ideal SWR with 12VDC.

I am unable to flash the firmware, either.

DOA?
Thanks,
Jonathan KC7FYS

3612. Re: [AT_Sprint] Troubleshooting Reset State

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-30 01:56:32 UTC
From: Stephen Wandling
Topic: 3611 Message: 3612

Jonathan,

If it were my rig, I would touch lots of connections with my soldering iron. It is my experience that visual inspection can be misleading. While I have read the posted suggestions and theories, it is not intuitive that an SWR mismatch might damage the MPU, but you must remember that I speak from a position of significant ignorance.

Good luck

72
Stephen
VE7NSD

Jonathan wrote:
> Vojtech and others who've given advice,
> I desoldered U11 first--no change to .8V on Pin 7 of U6.
> I then desoldered Q5--again virtually no change to Pin 7's voltage. (.75V).
>
>
>
> What would the obvious things to check before concluding I've damaged the MPU U6? Although spontaneous solder joint failure is less likely I've given the board the once-over; inspected the board itself, connections, components physically. Somebody mentioned the switches, which appear to work as usual. I've checked and re-checked that the input voltage is 9V +/- a percent or so. (Alinco DV 33MV power supply, and an AA battery pack used alternately). I've gone over Steve's voltages chart in the manual and found the MPU to be off--or as interpreted by Vojtech to be in RESET state.
>
> All LED segments are still lit with no hiss or signal from the audio output.
>
> I removed my touchkeyer unit just to make sure there was no possible interaction that might be causing this.
>
> I used hot air, which I find easiest for removing components. I fashioned a heat-focussing nozzle from a kitchen funnel and some kung-fu with a Dremel.
http://www.flickr.com/photos/jonathancharles/2900740972/
>
> Before I seek replacement of U6, what should I check? It always seems to be something extremely obvious--but in this case, it appears to be an actual component failure from my transmitting into a not-ideal SWR with 12VDC.
>
> I am unable to flash the firmware, either.
>
> DOA?
> Thanks,

> Jonathan KC7FYS
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>
>
>

3613. Re: Troubleshooting Reset State

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-30 01:58:13 UTC
From: querencias
Topic: 3611 Message: 3613

Jonathan,

check the value of R43 which should be 47K and check the connection on the InCircuit programming connector - in particular, measure the resistance to ground of the connector pin connected to U6/pin 7 - should be very high.

U11 has an "open drain" output and won't pull up pin 7, R43 is supposed to pull up the voltage on pin 7 - this could be the problem if it's open.

Can't see any other paths to ground

If these fail then probably U6 is smoked, or there's a solder bridge somewhere

Let us know how these turn out

72 Grant.

--- In AT_Sprint@yahoogroups.com, Jonathan <kc7fys@...> wrote:
>
> Vojtech and others who've given advice,
> I desoldered U11 first--no change to .8V on Pin 7 of U6.
> I then desoldered Q5--again virtually no change to Pin 7's voltage. (.75V).
>
>
>
> What would the obvious things to check before concluding I've damaged the MPU U6? Although spontaneous solder joint failure is less likely I've given the board the once-over;
inspected the board itself, connections, components physically. Somebody mentioned the switches, which appear to work as usual. I've checked and re-checked that the input voltage is 9V +/- a percent or so. (Alinco DV 33MV power supply, and an AA battery pack used alternately). I've gone over Steve's voltages chart in the manual and found the MPU to be off--or as interpreted by Vojtech to be in RESET state.
>
> All LED segments are still lit with no hiss or signal from the audio output.
>
> I removed my touchkeyer unit just to make sure there was no possible interaction that might be causing this.
>
> I used hot air, which I find easiest for removing components. I fashioned a heat-focussing nozzle from a kitchen funnel and some kung-fu with a Dremel.
http://www.flickr.com/photos/jonathancharles/2900740972/
>
> Before I seek replacement of U6, what should I check? It always seems to be something extremely obvious--but in this case, it appears to be an actual component failure from my transmitting into a not-ideal SWR with 12VDC.
>

> I am unable to flash the firmware, either.
>
> DOA?
> Thanks,
> Jonathan KC7FYS
>

3614. Re: [AT_Sprint] Troubleshooting Reset State

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-30 02:10:21 UTC
From: J. Haynes
Topic: 3611 Message: 3614

Stephen,
if yours is a position of significant ignorance, that places me in the front seat of the short bus.

Thanks for the tips.
Jonathan kc7fys

3615. Re: QBSA Question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-30 17:05:50 UTC
From: Jim Fraser
Topic: 3588 Message: 3615

Dohn,

I believe Steve retired the kit late last year.

Jim K6JF

--- In AT_Sprint@yahoogroups.com, "n8ewy" <n8ewy@...> wrote:
>
> Anybody know if the QBSA unit is still available? If not, any idea
on
> where one would get one. I would really like to get my hands on one
of
> them!
>
> Dohn N8EWY
>

3616. Re: Troubleshooting Reset State

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-30 19:53:22 UTC
From: querencias
Topic: 3611 Message: 3616

Hi Jonathan,

Did you measure the resistance across R43? best way is to measure would be from the input pin (2) of U11 to pin 7 of U6 - should see 47 K ohms. Also, check the resistance from pin 7/U6 to ground - should be pretty high. Since neither U11 nor Q5 have any influence on pin 7 voltage there's got to be a low impedance to ground or R43 isn't passing any current.

You've built quite a few projects - I'm impressed. I retired after 35 years as an engineer with a lot of experience in software development and digital logic design. Even though I took a lot of physics and electrical engineering classes in college, most of what I learned about electronics was actually from involvement with HAM radio! Trouble shooting problems like this are really the most fun, once you've found and fixed them - nothing like it! Keep up the good work

72 Grant

--- In AT_Sprint@yahoogroups.com, J. Haynes <eggs.4.iggs@...> wrote:
>
> Stephen,
> if yours is a position of significant ignorance, that places me in the front seat of the short bus.
>
> Thanks for the tips.
> Jonathan kc7fys
>

3617. Re: [AT_Sprint] Re: Troubleshooting Reset State

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-30 20:23:02 UTC
From: Vojtěch Bubník
Topic: 3611 Message: 3617

I back Grant's comments.

Only one word of caution. If you measure resistance of the CPU IO pins against ground or Vcc, you will find out there is a reverse polarized diode inside the chip between each IO pin and ground and another reverse polarized diode between Vcc(3.5V) and IO pin. Therefore if you measure resistance from IO pin against ground and put the + electrode of your DVM to GND, then you will measure resistance of theinternal diode and the diode will be open. The same applies to measuring R43. If you connect the - electrode of your DVM to 3.5V and + electrode to IO pin, then you will measure resistance of the internal diode. If you want to measure resistance of IO pin against ground, connect - electrode to GND. If you want to measure R43, connect - electrode to pin 7 of the controller.

Hope it makes sense.
73, Vojtech

> ------------ Původní zpráva ------------
> Od: querencias <tuquerencia@...>
> Předmět: [AT_Sprint] Re: Troubleshooting Reset State
> Datum: 30.9.2008 21:53:34
> --
> Hi Jonathan,
>
> Did you measure the resistance across R43? best way is to measure would be from
> the
> input pin (2) of U11 to pin 7 of U6 - should see 47 K ohms. Also, check the
> resistance
> from pin 7/U6 to ground - should be pretty high. Since neither U11 nor Q5 have
> any
> influence on pin 7 voltage there's got to be a low impedance to ground or R43
> isn't
> passing any current.
>
> You've built quite a few projects - I'm impressed. I retired after 35 years as
> an engineer
> with a lot of experience in software development and digital logic design. Even
> though I
> took a lot of physics and electrical engineering classes in college, most of
> what I learned
> about electronics was actually from involvement with HAM radio! Trouble
> shooting
> problems like this are really the most fun, once you've found and fixed them -
> nothing like
> it! Keep up the good work
>
> 72 Grant
>

> --- In AT_Sprint@yahoogroups.com, J. Haynes <eggs.4.iggs@...> wrote:
> >
> > Stephen,
> > if yours is a position of significant ignorance, that places me in the front
> seat of the
> short bus.
> >
> > Thanks for the tips.
> > Jonathan kc7fys
> >
>
>
>
>
>
>

3618. Re: [AT_Sprint] QBSA Question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-30 20:35:50 UTC
From: Terry Bachmann
Topic: 3588 Message: 3618

Dohn,

I have a QBSA which is still in the original package and I don't think I will have time to get at it anytime soon.

The only trouble is I'm headed out of town tonight and won't be home until the 10th of Oct. If you are still looking and are interested please drop me an email.

72, Terry W9UX

w9ux@... or tabachmann@...

n8ewy wrote:

> Anybody know if the QBSA unit is still available? If not, any idea on
> where one would get one. I would really like to get my hands on one of
> them!
>
> Dohn N8EWY
>
>

3619. RE: [AT_Sprint] QBSA Question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-09-30 20:39:14 UTC
From: Dohn
Topic: 3588 Message: 3619

I am interested. How could we pull this off????

Dohn Smythe
n8ewy@...

_____

From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com] On Behalf Of Terry Bachmann
Sent: Tuesday, September 30, 2008 4:36 PM
To: AT_Sprint@yahoogroups.com
Subject: Re: [AT_Sprint] QBSA Question

Dohn,

I have a QBSA which is still in the original package and I don't think I will have time to get at it anytime soon.

The only trouble is I'm headed out of town tonight and won't be home until the 10th of Oct. If you are still looking and are interested please drop me an email.

72, Terry W9UX

w9ux@... <mailto:w9ux%40arrl.net> or tabachmann@tds. <mailto:tabachmann%40tds.net> net

n8ewy wrote:

> Anybody know if the QBSA unit is still available? If not, any idea on
> where one would get one. I would really like to get my hands on one of
> them!
>
> Dohn N8EWY
>
>

3620. Re: Troubleshooting Reset State

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-01 10:08:21 UTC
From: kc7fys
Topic: 3611 Message: 3620

--- In AT_Sprint@yahoogroups.com, Vojtìch Bubník <bubnikv@...> wrote:
If you want to measure resistance of IO pin against ground, connect -
electrode to GND. If you want to measure R43, connect - electrode to
pin 7 of the controller.
>
> Hope it makes sense.

Thanks, Grant and Vojtìch,
R43, by that method shows a reading of 47K on my cheap VOM.
I went over and touched up solder joints that I could with my
fine-tipped iron. I also replaced U11 and Q5 with hot air, which
worked pretty well.

Shorting across R43 gives me 3V at pin 7.

Perhaps this is useless information, but the InCircuit Programming
Connector resistances to ground are:
1-0 ohms
2- 112 ohms
3- infinity
4-7 45 ohms

I gave the board a thorough cleaning with YaniClean, a Japanese
defluxer spray. I also gave it a gentle twist as per Steve's tip in
the manual. The only consistent thing has been the ".8" on the
display. If I had spare parts I could have easily swapped them out
one-by-one by now. Desoldering and resoldering has been a snap with
hot air so far.

Looks like it's time to watch me some TV!

A basic question about the U6 MPU and the formative process: is it
programmed, then the firmware flashed after that? Or is the firmware
the only changeable part of the chip's function? So, if I were to get
that same chip--and it turns out that it's indeed my problem, could I
swap them and then be able to load up the firmware and um... be in
business?

I'm guessing that's not the case, and Steve does initial programming
of U6.

The voice of a troubleshooter at the end of the line is always so
pitiful. No paper is quite light enough to be held down by the
ATS3--so it makes a lousy paperweight; what are the options?
Thanks for your guidance,
Jonathan KC7FYS

3621. Re: [AT_Sprint] Re: Troubleshooting Reset State

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-01 11:18:56 UTC
From: Michael Harnage
Topic: 3611 Message: 3621

You should be able to replace the chip and then flash it in circuit. Doesn't have to be flashed before putting it in circuit.

This problem has been very intriguing and unusual ...

-mike/w1mt

--- On Wed, 10/1/08, kc7fys <kc7fys@...> wrote:

>
> A basic question about the U6 MPU and the formative
> process: is it
> programmed, then the firmware flashed after that? Or is the
> firmware
> the only changeable part of the chip's function? So, if
> I were to get
> that same chip--and it turns out that it's indeed my
> problem, could I
> swap them and then be able to load up the firmware and
> um... be in
> business?
>

3622. Re: Troubleshooting Reset State

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-01 12:13:09 UTC
From: kc7fys
Topic: 3611 Message: 3622

Then it'll be fun to swap them out and see if indeed that does it. I had the rig on beacon mode, and was listening between CQs for a responder. It had been running about 5-10 minutes into a load that I didn't realize was 1.8-1.9:1 SWR. The ground is very poor here, too, on the 4th floor. I don't know if there was enough stray RF or whatever that might have caused this--but the likelihood of solder bridges, intermittents, broken parts--is all extremely low given that the rig has been in the field and on the road and kind of 'broken in' gently. It was just sitting there untouched when it stopped workin' and lit up ".8"

Beats me.
Jonathan KC7FYS

PS. The instructions for the firmware update don't usually match my actual experience using the program. Usually it's around the end when I get "hardware not found" errors and have to do multiple restarts and eventually something works right and it is loaded. Next time I flash the firmware in, I'll notate these more specifically. (Using Win98)

--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:
>
> You should be able to replace the chip and then flash it in circuit. Doesn't have to be flashed before putting it in circuit.
>
> This problem has been very intriguing and unusual ...
>
> -mike/w1mt
>
>
> --- On Wed, 10/1/08, kc7fys <kc7fys@...> wrote:
>
>
> > A basic question about the U6 MPU and the formative
> > process: is it
> > programmed, then the firmware flashed after that? Or is the
> > firmware
> > the only changeable part of the chip's function? So, if
> > I were to get
> > that same chip--and it turns out that it's indeed my
> > problem, could I
> > swap them and then be able to load up the firmware and
> > um... be in
> > business?
> >

>

3623. QBSA manual

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-02 00:05:02 UTC
From: n8ewy
Topic: 659 Message: 3623

Any chance of getting an assembly manual for the QBSA from someone here? I found one, but I need a manual. Any help please????

Dohn Smythe
n8ewy@comcast.net

3624. Re: QBSA manual

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-02 01:11:24 UTC
From: Bruce Beford
Topic: 659 Message: 3624

The QBSA Manual is available right on this forum, in the Files section.
Scroll down to the letter Q.....

-Bruce N1RX

--- In AT_Sprint@yahoogroups.com, "n8ewy" <n8ewy@...> wrote:
>
> Any chance of getting an assembly manual for the QBSA from someone
> here? I found one, but I need a manual. Any help please????
>
> Dohn Smythe
> n8ewy@...
>

3625. Re: new morse trainer for Mac OS

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-02 02:46:28 UTC
From: shadle
Topic: 3565 Message: 3625

FYI. This only works on Mac OS 10.5.x and greater. It also only works on Intel based machines; it does not currently work on PowerPC based machines, but Jonathan is hoping that he can port it to them at some point soon.

-john W4PAH

--- In AT_Sprint@yahoogroups.com, Stephen Wandling <swandling@...> wrote:
>
> John,
>
> Thanks for posting this. I have the G4FON software, but its on windoz
> and while I have xp running on my iMac with Parallels, its cumbersome to
> run it. I'm back into the hobby after a 50+ year break and my CW
> copying ability is coming back, but I am sure it would benefit from
> regular practice with a program such as this.
>
> I installed the program, but it fails to open. The download from Source
> Forge gives me a 1.9Mb dmg, and running that gives a 12.1Mb Disk image
> that contains the .app file, but it doesn't run. I'm pretty surprised,
> since application installations have been pretty bomb proof and this may
> be the first failure I have had in the 2 years I've had the iMac.
>
> I am copying AD5RX. Thanks Jonathan for bringing the G4FON idea to the Mac.
>
> Thanks for the post John.
>
> 72,
> Stephen
> VE7NSD
>
> john shadle wrote:
> > Just wanted to give a heads up to those of you who use Mac OS (or know of
> > folks who use Mac OS) about a new Morse Code learning device which is
> > available for Mac OS.
> >
> > This program is called the AD5RX Morse Trainer and it may be downloaded
> > *free* from the Source Forge site:
> >

> > http://sourceforge.net/projects/morsetrainer/
> >
> > Jonathan Nall, AD5RX, is a ham who lives out in 6-land these days.
By day
> > he works in the tech biz doing hardware verification, but he
really enjoys
> > tinkering around with other things in his spare time. In this
case, he's
> > offering a G4FON-like program for Mac users. It has quite a bit of
> > functionality of the G4FON program (QRM, QSB, effective speed and
actual
> > speed settings, etc.). In addition to those basic features, it
offers the
> > ability to set the number of stations QRMing and the ability of the
> > program to read the code back to you (in English) to check your
written
> > (or typed) transcription.
> >
> > The motivation behind developing this program (which he has poured
many
> > hours into) is to provide a quality, free Morse Code-learning
program to
> > Mac users who have been limited to pay-only or inferior programs
in the
> > past.
> >
> > The program will always remain free, but since the program is
still in its
> > infancy he is requesting that Mac hams download it and try it out.
Please
> > email all comments to ad5rx@... He is specifically looking for
> > comments related to the UI and the speech function (mentioned above).
> >
> > My interest in this is only that AD5RX is a friend of mine from
college
> > who happens to not subscribe to this list. That's all. I had
nothing to do
> > with the development of the program, personally.
> >
> > 73
> > -john W4PAH
> >
> >
> > ------------------------------------
> >
> > Yahoo! Groups Links
> >
> >
> >
> >

> >
>

3626. Re: [AT_Sprint] Re: new morse trainer for Mac OS

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-02 05:19:27 UTC
From: Stephen Wandling
Topic: 3565 Message: 3626

He also hopes to be able to compile a version for Mac OS 10.4. A work
in progress.

shadle wrote:
> FYI. This only works on Mac OS 10.5.x and greater. It also only works
> on Intel based machines; it does not currently work on PowerPC based
> machines, but Jonathan is hoping that he can port it to them at some
> point soon.
>
> -john W4PAH
>
> --- In AT_Sprint@yahoogroups.com, Stephen Wandling <swandling@...> wrote:
>
>> John,
>>
>> Thanks for posting this. I have the G4FON software, but its on windoz
>> and while I have xp running on my iMac with Parallels, its
>>
> cumbersome to
>
>> run it. I'm back into the hobby after a 50+ year break and my CW
>> copying ability is coming back, but I am sure it would benefit from
>> regular practice with a program such as this.
>>
>> I installed the program, but it fails to open. The download from
>>
> Source
>
>> Forge gives me a 1.9Mb dmg, and running that gives a 12.1Mb Disk image
>> that contains the .app file, but it doesn't run. I'm pretty surprised,
>> since application installations have been pretty bomb proof and this
>>
> may
>
>> be the first failure I have had in the 2 years I've had the iMac.
>>
>> I am copying AD5RX. Thanks Jonathan for bringing the G4FON idea to
>>
> the Mac.
>
>> Thanks for the post John.
>>
>> 72,
>> Stephen
>> VE7NSD

>>
>> john shadle wrote:
>>
>>> Just wanted to give a heads up to those of you who use Mac OS (or
>>>
> know of
>
>>> folks who use Mac OS) about a new Morse Code learning device which is
>>> available for Mac OS.
>>>
>>> This program is called the AD5RX Morse Trainer and it may be
>>>
> downloaded
>
>>> *free* from the Source Forge site:
>>>
>>> http://sourceforge.net/projects/morsetrainer/
>>>
>>> Jonathan Nall, AD5RX, is a ham who lives out in 6-land these days.
>>>
> By day
>
>>> he works in the tech biz doing hardware verification, but he
>>>
> really enjoys
>
>>> tinkering around with other things in his spare time. In this
>>>
> case, he's
>
>>> offering a G4FON-like program for Mac users. It has quite a bit of
>>> functionality of the G4FON program (QRM, QSB, effective speed and
>>>
> actual
>
>>> speed settings, etc.). In addition to those basic features, it
>>>
> offers the
>
>>> ability to set the number of stations QRMing and the ability of the
>>> program to read the code back to you (in English) to check your
>>>
> written
>
>>> (or typed) transcription.
>>>
>>> The motivation behind developing this program (which he has poured
>>>
> many
>

>>> hours into) is to provide a quality, free Morse Code-learning
>>>
> program to
>
>>> Mac users who have been limited to pay-only or inferior programs
>>>
> in the
>
>>> past.
>>>
>>> The program will always remain free, but since the program is
>>>
> still in its
>
>>> infancy he is requesting that Mac hams download it and try it out.
>>>
> Please
>
>>> email all comments to ad5rx@... He is specifically looking for
>>> comments related to the UI and the speech function (mentioned above).
>>>
>>> My interest in this is only that AD5RX is a friend of mine from
>>>
> college
>
>>> who happens to not subscribe to this list. That's all. I had
>>>
> nothing to do
>
>>> with the development of the program, personally.
>>>
>>> 73
>>> -john W4PAH
>>>
>>>
>>> ------------------------------------
>>>
>>> Yahoo! Groups Links
>>>
>>>
>>>
>>>
>>>
>>>
>
>
>
> ------------------------------------
>
> Yahoo! Groups Links

>
>
>
>
>

3627. Ultimatic vs. Iambic Keying

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-02 11:43:20 UTC
From: k5jfp
Topic: 3627 Message: 3627

I'm a newbie here ☐ just recently got my ATS3B going ☐ still tweaking. I am old school in CW keying, and can send great CW up to probably 50 wpm with my trusty single-action paddle and Ultimatic keying. Put me in front of a modern dual-action (squeeze) paddle with Iambic keying and I am a total lid. Has anyone considered an option for Ultimatic keying in the ATS3B? That would sure make life easier for me, since the paddle I now use is dual-action (the Palm mini).

Thanks,

Gary W5ZL

3628. NAQCC Special Event Station N3A

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-02 14:33:00 UTC
From: NAQCC
Topic: 3628 Message: 3628

We invite all ops to come help the North American QRP CW Club (NAQCC) celebrate its Fourth Anniversary.

How?

By working our special event station N3A which will be active during the whole month of October.

A handsome certificate and/or QSL card is available to everyone who works N3A and requests one or both.

We also have 3 special certificates for the FISTS members who make the most different band QSO's with our N3A stations during the month and in the FISTS and NAQCC sprints.

N3A will be operated from all 10 US call areas with the appropriate portable designator - N3A/1, N3A/2....N3A/0.

All 10 calls will be active in the FISTS sprint on the 11th and our NAQCC sprint on the 14th (15th UTC).

Full details including an operating schedule and how to request the certificate and QSL are on the "N3A Operation" page on the club web site - search "NAQCC" in your favorite search engine, or follow this link to our website (www.arm-tek.net/~yoel/main_n3a.html).

Join us in celebrating our Fourth Anniversary, share the fun and earn a few certificates and special QSLs!

This is also a good opportunity to join NAQCC. Lifetime membership is free and you will receive your membership number, membership certificate and starter kit FREE! No cost or obligation on your part.

73,
Tom, WY3H (NAQCC President)
John, K3WWP (NAQCC VP)

3629. still stumped - no low pitched tone during ref. osc. freq. cal

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-07 03:22:29 UTC
From: Alan Shapiro
Topic: 3629 Message: 3629

I still haven't found the culprit. In the check out and cal for my ATS-3b all steps OK until #8. I get the "CO" in the headphones, but then no "low pitched tone".
I noticed that I can inject audio into pin 3 of U3, so it seems the audio is OK. I've checked all the IC voltages and all is pretty close. Any ideas?

thanks!
Alan, NM5S

3630. Re: [AT_Sprint] still stumped - no low pitched tone during ref. osc. freq. cal

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-07 04:16:52 UTC
From: Michael Harnage
Topic: 3629 Message: 3630

Hmmm. The fact that you get the 10MHz at TP1 tells me that the DDS is working.

While in CO mode, try tracing the signal from C34 into the first mixer, then out the first mixer, through the crystal filter and in/out the second mixer. The freq into the first mixer through the crystal filter is nominally 4.9147 MHz. When that signal is mixed in the second mixer (with the 4.9152 crystal X5) you should get something under 600Hz out the 2nd mixer. If you can use a scope to see if you have signal at the proper places you might be able to isolate where the problem lies.

I may have missed something, this is off the top of my head, so if anyone sees anything else chime in.

Keep us posted.

-mike/w1mt

--- On Tue, 10/7/08, Alan Shapiro <nm5s@...> wrote:

> From: Alan Shapiro <nm5s@...>
> Subject: [AT_Sprint] still stumped - no low pitched tone during ref. osc. freq. cal
> To: AT_Sprint@yahoogroups.com
> Date: Tuesday, October 7, 2008, 4:22 AM
> I still haven't found the culprit. In the check out and
> cal for my
> ATS-3b all steps OK until #8. I get the "CO" in
> the headphones, but
> then no "low pitched tone".
> I noticed that I can inject audio into pin 3 of U3, so it
> seems the
> audio is OK. I've checked all the IC voltages and all
> is pretty
> close. Any ideas?
>
> thanks!
> Alan, NM5S
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>

3631. RE: [AT_Sprint] still stumped - no low pitched tone during ref. osc. freq. cal

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-07 19:52:43 UTC
From: Dohn
Topic: 3629 Message: 3631

This same thing happened to me I think. The very first time I went through the calibration everything worked perfect. I got the low pitched tone. But from that time forward, I could not get the low pitched tone after I did everything else. I continued one and sort of finished up and the rig seems to work great.

I'm not real experienced in theory. I did get a reply back then (maybe three weeks ago) which I can't find. It made sense though. It bothered me, but as I said, I think the rig is working OK with the exception that I can't get that low tone during that routine.

Dohn N8EWY

From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com] On Behalf Of Michael Harnage
Sent: Tuesday, October 07, 2008 12:17 AM
To: AT_Sprint@yahoogroups.com
Subject: Re: [AT_Sprint] still stumped - no low pitched tone during ref. osc. freq. cal

Hmmm. The fact that you get the 10MHz at TP1 tells me that the DDS is working.

While in CO mode, try tracing the signal from C34 into the first mixer, then out the first mixer, through the crystal filter and in/out the second mixer. The freq into the first mixer through the crystal filter is nominally 4.9147 MHz. When that signal is mixed in the second mixer (with the 4.9152 crystal X5) you should get something under 600Hz out the 2nd mixer. If you can use a scope to see if you have signal at the proper places you might be able to isolate where the problem lies.

I may have missed something, this is off the top of my head, so if anyone sees anything else chime in.

Keep us posted.

-mike/w1mt

--- On Tue, 10/7/08, Alan Shapiro <nm5s@... <mailto:nm5s%40yahoo.com> > wrote:

> From: Alan Shapiro <nm5s@... <mailto:nm5s%40yahoo.com> >
> Subject: [AT_Sprint] still stumped - no low pitched tone during ref. osc. freq. cal
> To: AT_Sprint@yahoogrou <mailto:AT_Sprint%40yahoogroups.com> ps.com
> Date: Tuesday, October 7, 2008, 4:22 AM

> I still haven't found the culprit. In the check out and
> cal for my
> ATS-3b all steps OK until #8. I get the "CO" in
> the headphones, but
> then no "low pitched tone".
> I noticed that I can inject audio into pin 3 of U3, so it
> seems the
> audio is OK. I've checked all the IC voltages and all
> is pretty
> close. Any ideas?
>
> thanks!
> Alan, NM5S
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>

3632. FS: ATS 3b - new and unopened in bag

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-07 21:19:27 UTC
From: g0azs
Topic: 3632 Message: 3632

Hi All

I just don't have the time to build my ATS-3b and I would rather someone else could enjoy it.

I will happily sell it for what I paid - $200 (or equivalent) plus shipping costs to wherever you are (Note: I am in the UK).

Please reply directly to me if interested.

73 Marc G0AZS

3633. RE: [AT_Sprint] FS: ATS 3b - new and unopened in bag

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-08 12:02:23 UTC
From: Dale Putnam
Topic: 3632 Message: 3633

If you wish, I will build it for you, and it won't cost anything...
Done for others too. --... ...--Dale - WC7S in Wy

To: AT_Sprint@...mFrom: marc.g0azs@...: Tue, 7 Oct 2008 21:19:27 +0000Subject: [AT_Sprint] FS: ATS 3b - new and unopened in bag

Hi AllI just don't have the time to build my ATS-3b and I would rathersomeone else could enjoy it.I will happily sell it for what I paid - $200 (or equivalent) plusshipping costs to wherever you are (Note: I am in the UK).Please reply directly to me if interested.73 Marc G0AZS

_____
See how Windows connects the people, information, and fun that are part of your life.
http://clk.atdmt.com/MRT/go/msnnkwxp1020093175mrt/direct/01/

3634. Re: FS: ATS 3b - new and unopened in bag

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-08 12:53:43 UTC
From: jaakko330
Topic: 3632 Message: 3634

--- In AT_Sprint@yahoogroups.com, Dale Putnam <daleputnam@...> wrote:

> If you wish, I will build it for you, and it won't cost anything...
> Done for others too. --... ...--Dale - WC7S in Wy

I was thinking that too. The soldering with solder paste and hot air tools goes quite fast, but the coil winding takes some time. Some debugging is also usually needed. Anyway needs a few evenings after work - time that could also be used for something else.

Quick time estimate. One evening is about 4 hours of work without breaks.

1. evening all passive SMD components

2. evening all SMD semiconductors and small DDS chip

3. evening all through hole parts

4. evening all filter boards without coils

For coil winding I would guess that 6 toroids for two boards needs one or two evenings.

73, Jaakko OH7BF/F5VGL

3635. Re: still stumped - no low pitched tone during ref. osc. freq. cal

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-10 22:58:30 UTC
From: Alan Shapiro
Topic: 3629 Message: 3635

Mike,

To be specific: I hear 10 MHz in my receiver. I do not see 10 MHz either on my scope or on my freq. counter. In the "CO" mode I looked for DDS LO with my scope and find a signal of approx. 8.6 MHz rather than the 4.9147 MHz. Does this problem send me to the MPU?

--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:
>
> Hmmm. The fact that you get the 10MHz at TP1 tells me that the DDS is working.
>
> While in CO mode, try tracing the signal from C34 into the first mixer, then out the first mixer, through the crystal filter and in/out the second mixer. The freq into the first mixer through the crystal filter is nominally 4.9147 MHz. When that signal is mixed in the second mixer (with the 4.9152 crystal X5) you should get something under 600Hz out the 2nd mixer. If you can use a scope to see if you have signal at the proper places you might be able to isolate where the problem lies.
>
> I may have missed something, this is off the top of my head, so if anyone sees anything else chime in.
>
> Keep us posted.
>
> -mike/w1mt
>
>
> --- On Tue, 10/7/08, Alan Shapiro <nm5s@...> wrote:
>
> > From: Alan Shapiro <nm5s@...>
> > Subject: [AT_Sprint] still stumped - no low pitched tone during ref. osc. freq. cal
> > To: AT_Sprint@yahoogroups.com
> > Date: Tuesday, October 7, 2008, 4:22 AM
> > I still haven't found the culprit. In the check out and
> > cal for my
> > ATS-3b all steps OK until #8. I get the "CO" in
> > the headphones, but
> > then no "low pitched tone".
> > I noticed that I can inject audio into pin 3 of U3, so it
> > seems the
> > audio is OK. I've checked all the IC voltages and all
> > is pretty

> > close. Any ideas?
> >
> > thanks!
> > Alan, NM5S
> >
> >
> > ------------------------------------
> >
> > Yahoo! Groups Links
> >
> >
> >
>

3636. Firmware: No device found or device disconnected

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-11 02:48:13 UTC
From: kc7fys
Topic: 3636 Message: 3636

Probably cogent to anyone installing or updating firmware. I'm having this issue. Windows 98. One step in the IAR Embedded Workbench IDE program. LP1/LP2/LP3 are three choices in one step of the firmware flash process. I need a brief rundown of what that is. My PC isn't "seeing" the physically connected processor. Where else may I see where this connection is--aside from inside the IAR program itself?
Jonathan KC7FYS

3637. RE: [AT_Sprint] Firmware: No device found or device disconnected

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-11 03:13:27 UTC
From: Ken Lotts
Topic: 3636 Message: 3637

Check your parallel port mode (in bios)
Mine is set to SPP and it works fine with the workbench

other modes would be
EPP
ECP
ECP+EPP

Ken aa7jc
-----Original Message-----
From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com]On Behalf Of kc7fys
Sent: Friday, October 10, 2008 7:48 PM
To: AT_Sprint@yahoogroups.com
Subject: [AT_Sprint] Firmware: No device found or device disconnected

Probably cogent to anyone installing or updating firmware. I'm having this issue. Windows 98. One step in the IAR Embedded Workbench IDE program. LP1/LP2/LP3 are three choices in one step of the firmware flash process. I need a brief rundown of what that is. My PC isn't "seeing" the physically connected processor. Where else may I see where this connection is--aside from inside the IAR program itself?
Jonathan KC7FYS

3638. assistance pleaseee

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-11 14:23:30 UTC
From: n8ewy
Topic: 3638 Message: 3638

Hello all,

I have written to the group several times and received great advice and assistance. I live in the Tecumseh, MI area, just south of Ann Arbor. I am looking for someone who might be willing to meet with me, face to face, for some assistance using an oscilloscope and with some tips and/or theory in trouble shooting.

I have built several rigs with very good results. I have since rendered them useless, in two cases (a NC 40A and a SW-40), on transmission.
Probably the finals, but that is a very uneducated guess. I have a good Extech volt/ohm meter and a new bench grade frequency counter. I also have a variety of noise generator and other small Elecraft type bench helpers. I am thinking seriously of getting an oscilloscope sometime soon. I will not do it though until I am confident that I understand its usage and the theory necessary to apply it. Unfortunately, I can only learn so much googling and yahooing. I usually learn more in 5 minutes, hands on, than I can figure out in a day searching the internet.

Sooooooooo ..... I was hoping against hope that I might find someone within a reasonable driving distance willing to meet with me and just go over a couple of these things. Perhaps help me understand some basic theory involved with construction, component uses and differences and subsequently, <frown>, troubleshooting .

Once again ..... I am in SE Michigan. Tecumseh actually. I am driven in this endeavor and willing to travel some ways to accomplish it or assist someone to reach me.

Please contact me privately. This is slightly embarrassing. <grin>

Thank you for the bandwidth and I hope to hear from someone.

Dohn Smythe N8EWY
n8ewy@...

3639. Troubleshooter

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-12 03:46:23 UTC
From: kc7fys
Topic: 3639 Message: 3639

I have reached the limit of my current abilities with troubleshooting my 3B. I would like to send just the board to one of you fellas to have a look at it. It worked fine for a year, hundreds of QSOs, then went ".8" during operation. I replaced the MPU and now can't flash the firmware. I would appreciate a volunteer to just accept it to look at at their leisure. Mail me offline. Could just be the firmware.
Regards,
Jonathan KC7FYS

3640. NAQCC Sprint Tuesday night!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-12 20:42:45 UTC
From: NAQCC
Topic: 2905 Message: 3640

NAQCC Sprint Tuesday night!
This coming Tuesday evening will be the monthly NAQCC Sprint for October, 2008.

I will refer you to the proper URL:

http://www.arm-tek.net/~yoel/sprint200810.html

There you will find all the details as to time, frequencies and also a special prize.

This month's Special Award goes to the winner of a drawing among the following: Those working the most different special event calls (N3A/#) in each of our 5 sprint divisions.

This is a monthly event that caters to the CW veteran, the CW newcomer, straight key and bug fans. All are welcome to participate (this includes QRO); but you must use QRP power levels to compete for awards.

Come join us and have a real good time!

73 de Dave VA3RJ
NAQCC #0004

3641. Re: Troubleshooter

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-13 00:38:46 UTC
From: querencias
Topic: 3639 Message: 3641

Hi Jonathan,

Have you measured the resistance/voltage on pin 7/MPU, the RESET?

If it's still low then we have to find the cause before you can reload the firmware.

maybe we can find it where you are with your present resources.

Grant

--- In AT_Sprint@yahoogroups.com, "kc7fys" <kc7fys@...> wrote:
>
> I have reached the limit of my current abilities with troubleshooting
> my 3B. I would like to send just the board to one of you fellas to
> have a look at it. It worked fine for a year, hundreds of QSOs, then
> went ".8" during operation. I replaced the MPU and now can't flash the
> firmware. I would appreciate a volunteer to just accept it to look at
> at their leisure. Mail me offline. Could just be the firmware.
> Regards,
> Jonathan KC7FYS
>

3642. Re:[AT_Sprint] Re: Troubleshooter

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-13 01:16:46 UTC
From: J. Haynes
Topic: 3639 Message: 3642

Yeah. One thing about this device-parts are so cheap compared to time spent uninstalling and reinstalling. If I could discover the problem by 1-by-1 replacement and testing... A kit of the 15 most likely to go belly-up components would be handy.
Jonathan

3643. Re: [AT_Sprint] Re: Troubleshooter

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-13 01:19:19 UTC
From: John A. Evans - N0HJ
Topic: 3639 Message: 3643

It's usually not the parts fault, but the act of installation or stress
on connections that causes failures.

72 - john - n0hj

J. Haynes wrote:
>
> ...A kit of the 15 most likely to go belly-up components would be handy.
> Jonathan
>
> __

3644. Re: [AT_Sprint] Re: Troubleshooter

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-13 01:24:10 UTC
From: J. Haynes
Topic: 3639 Message: 3644

Understood. But reinstallation of such tiny parts is one way to eliminate a variable while testing and reflowing joints, IMHO.
Jonathan kc7fys

3645. Re: FS: ATS 3b - new and unopened in bag - SOLD

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-13 12:53:00 UTC
From: g0azs
Topic: 3632 Message: 3645

To Dale and Jaakko

Thanks for the kind offers to build the kit, but it has now gone to a good home. I still have my PFR-3 built here but at least someone will get to enjoy the ATS-3b too.

73 Marc G0AZS

3646. RE: [AT_Sprint] Re: FS: ATS 3b - new and unopened in bag - SOLD

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-13 13:32:24 UTC
From: Dale Putnam
Topic: 3632 Message: 3646

Excellant Marc,
that's a good thing, and another radio is born, a good thing for sure.
Have a good week, maybe we can meet on the air one day too.
--... ...--Dale - WC7S in Wy

To: AT_Sprint@yahoogroups.comFrom: marc.g0azs@...: Mon, 13 Oct 2008 12:53:00 +0000Subject: [AT_Sprint] Re: FS: ATS 3b - new and unopened in bag - SOLD

To Dale and JaakkoThanks for the kind offers to build the kit, but it has now gone to agood home. I still have my PFR-3 built here but at least someone willget to enjoy the ATS-3b too.73 Marc G0AZS

_____
Get more out of the Web. Learn 10 hidden secrets of Windows Live.
http://windowslive.com/connect/post/jamiethomson.spaces.live.com-Blog-cns!550F681DAD532637!5295.entry?ocid=TXT_TAGLM_WL_domore_092008

3647. Looking for ATS 3B For Sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-13 19:16:47 UTC
From: Dennis Funk
Topic: 3647 Message: 3647

Last week, after more than a year spent building, testing, and troubleshooting my ATS 3b, I was finally ready to take it out to the field and get on the air. Unfortunately, before I could do so, a daypack containing the 3b, paddle, battery pack and other gear was stolen from the trunk of my car.

Since I am not one to give up easily, my question is:
Does anyone in the group have an unbuilt ATS 3b for sale?

Dennis Funk, N6PFJ
defunk99@...

3648. Re: [AT_Sprint] Looking for ATS 3B For Sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-14 00:24:59 UTC
From: Hank Greeb
Topic: 3647 Message: 3648

You better look out for an ATS-3b being sold on e-Bay. Is there any
unique things to identify it?

Hg

Dennis Funk wrote:
> Last week, after more than a year spent building, testing, and
> troubleshooting my ATS 3b, I was finally ready to take it out to the
> field and get on the air. Unfortunately, before I could do so, a
> daypack containing the 3b, paddle, battery pack and other gear was
> stolen from the trunk of my car.
>
> Since I am not one to give up easily, my question is:
> Does anyone in the group have an unbuilt ATS 3b for sale?
>
> Dennis Funk, N6PFJ
> defunk99@...
>
>
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>
>
>
>

3649. RE: [AT_Sprint] Looking for ATS 3B For Sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-14 01:57:28 UTC
From: Dale Putnam
Topic: 3647 Message: 3649

Did you find one yet? I have one that I am planning to build for me, and I may have a lead on one that is a partially built one, if you are still looking, --... ...--Dale - WC7S in Wy

To: AT_Sprint@yahoogroups.comFrom: defunk99@...: Mon, 13 Oct 2008 19:16:47 +0000Subject: [AT_Sprint] Looking for ATS 3B For Sale

Last week, after more than a year spent building, testing, andtroubleshooting my ATS 3b, I was finally ready to take it out to thefield and get on the air. Unfortunately, before I could do so, adaypack containing the 3b, paddle, battery pack and other gear wasstolen from the trunk of my car.Since I am not one to give up easily, my question is:Does anyone in the group have an unbuilt ATS 3b for sale?Dennis Funk, N6PFJdefunk99@...

_____
See how Windows connects the people, information, and fun that are part of your life.
http://clk.atdmt.com/MRT/go/msnnkwxp1020093175mrt/direct/01/

3650. RE: [AT_Sprint] Looking for ATS 3B For Sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-14 04:50:22 UTC
From: J. Haynes
Topic: 3647 Message: 3650

Wha t's that lead? I'm interested.

3651. Oops

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-14 04:55:39 UTC
From: J. Haynes
Topic: 3651 Message: 3651

Ignore that. An LC meter's what I'm looking for.

3652. Re: Ultimatic vs. Iambic Keying

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-14 17:46:38 UTC
From: qwasty
Topic: 3627 Message: 3652

I'm not a CW operator yet, but after reading a bit about iambic and ultimatic keying, I have to second this request. Ultimatic keying seems much simpler and more useful. Less attention and thinking is required, so higher speeds can be achieved. I knew nothing about ultimatic keying until reading this post, but now it seems strange that anyone would try to do anything different from ultimatic keying.

Where can I get an ultimatic keyer?

--- In AT_Sprint@yahoogroups.com, "k5jfp" <w5zl@...> wrote:
>
> I'm a newbie here ☐ just recently got my ATS3B going ☐ still tweaking.
> I am old school in CW keying, and can send great CW up to probably 50
> wpm with my trusty single-action paddle and Ultimatic keying. Put me
> in front of a modern dual-action (squeeze) paddle with Iambic keying
> and I am a total lid. Has anyone considered an option for Ultimatic
> keying in the ATS3B? That would sure make life easier for me, since
> the paddle I now use is dual-action (the Palm mini).
>
> Thanks,
>
> Gary W5ZL
>

3653. Re: Ultimatic vs. Iambic Keying

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-14 18:28:48 UTC
From: Jim Fraser
Topic: 3627 Message: 3653

I have heard of Ultimatic Keying, but until now never took the time to research what is was, sounds interesting. I see that my N0XAS PicoKeyer supports this mode. Since I have not done too much with Iambic for it to be a preferred mode, I think I will give Ultimatic it a try. Maybe the 3B firmware can be changed at some point to include this mode.

Jim K6JF

3654. Re: [AT_Sprint] Re: Ultimatic vs. Iambic Keying

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-14 18:36:29 UTC
From: Jim Miller
Topic: 3627 Message: 3654
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

3655. RE: [AT_Sprint] Re: Ultimatic vs. Iambic Keying

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-14 19:04:00 UTC
From: ken Lotts (at home)
Topic: 3627 Message: 3655
Attachments: 2 described; binary payloads are missing from this source WARC

The K1EL keyers have ultimatic mode. I have a K40 ..

http://k1el.tripod.com/

FWIW,

I never knew how bent I was on needing Iambic mode B until I tried using the ats3 iambic mode A.

My sending (in mode A and even the previously broken mode B) was such an embarrassment that I hardly ever used the ATS3 on the air.

I recently went into the firmware and made sure I never accidentally ever select mode A again.

Ken

aa7jc

From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com] On Behalf Of qwasty
Sent: Tuesday, October 14, 2008 10:47 AM
To: AT_Sprint@yahoogroups.com
Subject: [AT_Sprint] Re: Ultimatic vs. Iambic Keying

I'm not a CW operator yet, but after reading a bit about iambic and ultimatic keying, I have to second this request. Ultimatic keying seems much simpler and more useful. Less attention and thinking is required, so higher speeds can be achieved. I knew nothing about ultimatic keying until reading this post, but now it seems strange that anyone would try to do anything different from ultimatic keying.

Where can I get an ultimatic keyer?

--- In AT_Sprint@yahoogroups.com <mailto:AT_Sprint%40yahoogroups.com> , "k5jfp" <w5zl@...> wrote:
>
> I'm a newbie here - just recently got my ATS3B going - still tweaking.
> I am old school in CW keying, and can send great CW up to probably 50
> wpm with my trusty single-action paddle and Ultimatic keying. Put me
> in front of a modern dual-action (squeeze) paddle with Iambic keying
> and I am a total lid. Has anyone considered an option for Ultimatic
> keying in the ATS3B? That would sure make life easier for me, since
> the paddle I now use is dual-action (the Palm mini).
>

> Thanks,
>
> Gary W5ZL
>

3656. Re: Wilderness Radio Operation with ATS-3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-14 20:23:57 UTC
From: qwasty
Topic: 3517 Message: 3656

Thank you very much for your detailed reviews of the ATS-3A, ATS-3B, and competing radios like the Yaesu FT-817.

--- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@...> wrote:
>
> Over the Labor Day Weekend I fulfilled a lifetime dream of operating a
> ham radio station from a remote wilderness location on a backpack
> trip. While I've operated QRP portable from numerous tent campsites
> in the woods and mountains here in Colorado, somehow I'd never managed
> to take an HF station on an overnight backpack trip into a real
> wilderness area. It finally happened.
>
> My trip was about 9 miles from the trailhead, into the Mount Zirkel
> Wilderness northwest of Walden, CO. Even though it was a major
> weekend, I had several square miles of stunning scenery, and three
> subalpine lakes full of large trout all to myself for more than two
> days!
>
> The station weighed about 3 pounds and consisted of the ATS-3B, 5 band
> modules in a small metal box, a 3-cell lithium-ion 12V 2.2AH pack, a
> homemade ALT-type L-network tuner, Palm paddles, small in-ear hones, a
> 57-foot inverted-L #22 antenna wire, a 16-foot #22 counterpoise, a 100-
> foot 3/32" dacron rope, a 60-foot 3/32" dacron rope, and a small
> organizer pack for protection. In addition I took an extra spinning
> reel spool loaded with braided line for putting up the antenna, plus
> two large steel nuts for use as casting weights. These items had a
> dual purpose - putting up the third rope for the "bear bag" food
> storage.
>
> The sloping INV-L antenna was about 33 feet high in a tree at its high
> end, and it sloped down to about 18 feet up in another tree. Then it
> came down vertically to the tent. The 16 feet of counterpoise was
> laid out on the ground away from the antenna. There was no

feedline.
> I've used similar setups before. While Eznec shows it to be
inferior
> to a center-fed dipole at 30 feet, it's less to carry and simpler
to
> erect.
>
> Operating the rig was the fulfillment of a dream I've had for
almost
> 50 years. My first contact was Friday after dark on 40M with KB0QZ
in
> Centralia, MO. He was 579-589, but he only gave me 529.
> Nevertheless, we had a nice ragchew lasting more than 30 minutes;
> Marty was running 30W with an OCF dipole, and he sounded great up
> there at 10,000 feet.
>
> Saturday afternoon I tuned up on 20M and called CQ a few times,
with
> no luck. The I heard DL5RBR working a contest, and I called him
just
> for kicks. He came right back and we had a complete exchange
lasting
> a few seconds - at least the rig was getting out on 20M. Later
that
> night I tuned the antenna up on 30M, and had a wonderful, solid Q
with
> NO8D/P, who was camping Labor Day Weekend with his XYL in Ohio. He
> was 599 with a 100W rig and a dipole, and he was solid all the time
-
> I had to turn down the phones. He gave me 569-589 with QSB, and we
> had a nice chat for quite a while. We were both intrigued to be
> portable and solid on 30M well after dark. After I signed with
> NO8D/P, AB9NZ called me and said he'd been listening in, and wanted
me
> to know I was getting into the Chicago area real well. We gave
each
> other 599's and exhanged a nice words both ways - he sounded like
he
> was across the lake instead of across the Plains.
>
> Steve Weber made this possible. He followed his dreams and worked
> hard to make this radio available to others. Thanks again Steve!
The
> design of the ATS rigs is perfect for the type of trip where you
can't
> think about taking an HF radio unless it's small and light. It's
no
> rock crusher, but it's a real multiband performer on a simple wire
> once you get it matched. The control interface works fine in a
dark

> tent, and the power consumption is incredible for a full 5W rig.
> After a total of 2 or more hours of operating, I used 10 to 20% of
my
> LiIon pack - I was down to 11.8V. This thing continues to amaze
> me...and there are no sunspots now...wait til the new solar cycle
gets
> going!
>
> Hope this provides a little encouragement for some of you to put
> together a little pack with the stuff you need to go portable. At
> first, it's a little hassle, but it gets easier each time you go
out
> and try it.
>
> 72/73
>
> George/Carey
> KX0R
>

3657. Re: Ultimatic vs. Iambic Keying

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-14 22:18:04 UTC
From: qwasty
Topic: 3627 Message: 3657

I have some research to report.

George Carey Fuller, KX0R, recommended the Palm Radio Mini Paddle in his eham.net review of the Elecraft KX1. It looks like the ideal portable CW key.

http://www.eham.net/reviews/detail/3586?page=2
http://www.mtechnologies.com/palm/

I noticed that Palm Radio Code Cube is a tiny keyer that plugs into the back of the Mini Paddle.

http://www.mtechnologies.com/palm/cc.htm

The product webpage does not mention what keying modes it can do, but it does mention that it uses a Jackson Harbor Press PK4 keyer chip. Further research showed that the Jackson Harbor chip is actually the latest PK-4 SSR chip, and, here's the best part, the chip does Ultimatic keying.

http://home.att.net/~jacksonharbor/pk4ssr.htm

So, you got your hardy little Palm Radio Mini Paddle with the optional Code Cube, and you have Ultimatic mode keying in a tiny rugged package, ideally suited to portable or backpack use with the KD1JV ATS-3B QRP radio. So, it looks like this problem is solved. All that's left to do is try it.

--- In AT_Sprint@yahoogroups.com, "ken Lotts \(at home\)" <ken@...> wrote:
>
> The K1EL keyers have ultimatic mode. I have a K40 ..
>
> http://k1el.tripod.com/
>
>
>
> FWIW,
>
> I never knew how bent I was on needing Iambic mode B until I tried using the
> ats3 iambic mode A.
>
> My sending (in mode A and even the previously broken mode B) was such an
> embarrassment that I hardly ever used the ATS3 on the air.
>

> I recently went into the firmware and made sure I never
accidentally ever
> select mode A again.
>
>
>
> Ken
>
> aa7jc
>
>
>
> From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com]
On Behalf
> Of qwasty
> Sent: Tuesday, October 14, 2008 10:47 AM
> To: AT_Sprint@yahoogroups.com
> Subject: [AT_Sprint] Re: Ultimatic vs. Iambic Keying
>
>
>
> I'm not a CW operator yet, but after reading a bit about iambic and
> ultimatic keying, I have to second this request. Ultimatic keying
> seems much simpler and more useful. Less attention and thinking is
> required, so higher speeds can be achieved. I knew nothing about
> ultimatic keying until reading this post, but now it seems strange
> that anyone would try to do anything different from ultimatic
keying.
>
> Where can I get an ultimatic keyer?
>
> --- In AT_Sprint@yahoogroups.com <mailto:AT_Sprint
%40yahoogroups.com> ,
> "k5jfp" <w5zl@> wrote:
> >
> > I'm a newbie here - just recently got my ATS3B going - still
> tweaking.
> > I am old school in CW keying, and can send great CW up to
probably
> 50
> > wpm with my trusty single-action paddle and Ultimatic keying. Put
me
> > in front of a modern dual-action (squeeze) paddle with Iambic
keying
> > and I am a total lid. Has anyone considered an option for
Ultimatic
> > keying in the ATS3B? That would sure make life easier for me,
since
> > the paddle I now use is dual-action (the Palm mini).
> >

> > Thanks,
> >
> > Gary W5ZL
> >
>

3658. RE: [AT_Sprint] Re: Ultimatic vs. Iambic Keying

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-14 23:22:55 UTC
From: ken Lotts (at home)
Topic: 3627 Message: 3658

The mini paddle is an excellent paddle (I own one and love it) but the ATS3 rig is a gram counters dream radio.. It's a real bulls eye for backpacking unless you need to haul around ton of accessories with it. That is why I (and several others) use integrated home made touch paddles.

http://www.flickr.com/photos/lotts-family/2858603004/

Ken

Aa7jc

From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com] On Behalf Of qwasty
Sent: Tuesday, October 14, 2008 3:18 PM
To: AT_Sprint@yahoogroups.com
Subject: [AT_Sprint] Re: Ultimatic vs. Iambic Keying

I have some research to report.

George Carey Fuller, KX0R, recommended the Palm Radio Mini Paddle in his eham.net review of the Elecraft KX1. It looks like the ideal portable CW key.

http://www.eham.net/reviews/detail/3586?page=2
http://www.mtechnologies.com/palm/

I noticed that Palm Radio Code Cube is a tiny keyer that plugs into the back of the Mini Paddle.

http://www.mtechnologies.com/palm/cc.htm

The product webpage does not mention what keying modes it can do, but it does mention that it uses a Jackson Harbor Press PK4 keyer chip. Further research showed that the Jackson Harbor chip is actually the latest PK-4 SSR chip, and, here's the best part, the chip does Ultimatic keying.

http://home.att.net/~jacksonharbor/pk4ssr.htm

So, you got your hardy little Palm Radio Mini Paddle with the optional Code Cube, and you have Ultimatic mode keying in a tiny rugged package, ideally suited to portable or backpack use with the KD1JV ATS-3B QRP radio. So, it looks like this problem is solved. All that's left to do is try it.

--- In AT_Sprint@yahoogroups.com <mailto:AT_Sprint%40yahoogroups.com> , "ken Lotts \(at home\)" <ken@...>
wrote:

>
> The K1EL keyers have ultimatic mode. I have a K40 ..
>
> http://k1el.tripod.com/
>
>
>
> FWIW,
>
> I never knew how bent I was on needing Iambic mode B until I tried
using the
> ats3 iambic mode A.
>
> My sending (in mode A and even the previously broken mode B) was
such an
> embarrassment that I hardly ever used the ATS3 on the air.
>
> I recently went into the firmware and made sure I never
accidentally ever
> select mode A again.
>
>
>
> Ken
>
> aa7jc
>
>
>
> From: AT_Sprint@yahoogroups.com <mailto:AT_Sprint%40yahoogroups.com>
[mailto:AT_Sprint@yahoogroups.com <mailto:AT_Sprint%40yahoogroups.com>]
On Behalf
> Of qwasty
> Sent: Tuesday, October 14, 2008 10:47 AM
> To: AT_Sprint@yahoogroups.com <mailto:AT_Sprint%40yahoogroups.com>
> Subject: [AT_Sprint] Re: Ultimatic vs. Iambic Keying
>
>
>
> I'm not a CW operator yet, but after reading a bit about iambic and
> ultimatic keying, I have to second this request. Ultimatic keying
> seems much simpler and more useful. Less attention and thinking is
> required, so higher speeds can be achieved. I knew nothing about
> ultimatic keying until reading this post, but now it seems strange
> that anyone would try to do anything different from ultimatic
keying.
>
> Where can I get an ultimatic keyer?
>
> --- In AT_Sprint@yahoogroups.com <mailto:AT_Sprint%40yahoogroups.com>

<mailto:AT_Sprint
%40yahoogroups.com> ,
> "k5jfp" <w5zl@> wrote:
> >
> > I'm a newbie here - just recently got my ATS3B going - still
> tweaking.
> > I am old school in CW keying, and can send great CW up to
probably
> 50
> > wpm with my trusty single-action paddle and Ultimatic keying. Put
me
> > in front of a modern dual-action (squeeze) paddle with Iambic
keying
> > and I am a total lid. Has anyone considered an option for
Ultimatic
> > keying in the ATS3B? That would sure make life easier for me,
since
> > the paddle I now use is dual-action (the Palm mini).
> >
> > Thanks,
> >
> > Gary W5ZL
> >
>

3659. Re: Ultimatic vs. Iambic Keying

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-15 03:17:29 UTC
From: qwasty
Topic: 3627 Message: 3659

That's an amazing photo. How did you operate the camera with one hand on the radio and the other on the touch paddles? Surely that's a superior setup to any commercial solution.

I've been out of the hobby for many years, but maybe I'll be getting back into it soon. If I do, I want that...that thing...in the photo. I'll need to start by getting a soldering iron I guess.

You have any details on how you put the touch paddles and keyer together in your neat integrated package?

--- In AT_Sprint@yahoogroups.com, "ken Lotts \(at home\)" <ken@...> wrote:
>
> The mini paddle is an excellent paddle (I own one and love it) but the ATS3
> rig is a gram counters dream radio.. It's a real bulls eye for backpacking
> unless you need to haul around ton of accessories with it. That is why I
> (and several others) use integrated home made touch paddles.
>
>
>
> http://www.flickr.com/photos/lotts-family/2858603004/
>
>
>
>
>
> Ken
>
> Aa7jc
>
>
>
> From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com] On Behalf
> Of qwasty
> Sent: Tuesday, October 14, 2008 3:18 PM
> To: AT_Sprint@yahoogroups.com
> Subject: [AT_Sprint] Re: Ultimatic vs. Iambic Keying
>
>
>
> I have some research to report.

>
> George Carey Fuller, KX0R, recommended the Palm Radio Mini Paddle
in
> his eham.net review of the Elecraft KX1. It looks like the ideal
> portable CW key.
>
> http://www.eham.net/reviews/detail/3586?page=2
> http://www.mtechnologies.com/palm/
>
> I noticed that Palm Radio Code Cube is a tiny keyer that plugs into
> the back of the Mini Paddle.
>
> http://www.mtechnologies.com/palm/cc.htm
>
> The product webpage does not mention what keying modes it can do,
but
> it does mention that it uses a Jackson Harbor Press PK4 keyer chip.
> Further research showed that the Jackson Harbor chip is actually
the
> latest PK-4 SSR chip, and, here's the best part, the chip does
> Ultimatic keying.
>
> http://home.att.net/~jacksonharbor/pk4ssr.htm
>
> So, you got your hardy little Palm Radio Mini Paddle with the
> optional Code Cube, and you have Ultimatic mode keying in a tiny
> rugged package, ideally suited to portable or backpack use with the
> KD1JV ATS-3B QRP radio. So, it looks like this problem is solved.
All
> that's left to do is try it.
>
> --- In AT_Sprint@yahoogroups.com <mailto:AT_Sprint
%40yahoogroups.com> , "ken
> Lotts \(at home\)" <ken@>
> wrote:
> >
> > The K1EL keyers have ultimatic mode. I have a K40 ..
> >
> > http://k1el.tripod.com/
> >
> >
> >
> > FWIW,
> >
> > I never knew how bent I was on needing Iambic mode B until I
tried
> using the
> > ats3 iambic mode A.
> >
> > My sending (in mode A and even the previously broken mode B) was

> such an
> > embarrassment that I hardly ever used the ATS3 on the air.
> >
> > I recently went into the firmware and made sure I never
> accidentally ever
> > select mode A again.
> >
> >
> >
> > Ken
> >
> > aa7jc
> >
> >
> >
> > From: AT_Sprint@yahoogroups.com <mailto:AT_Sprint
%40yahoogroups.com>
> [mailto:AT_Sprint@yahoogroups.com <mailto:AT_Sprint
%40yahoogroups.com>]
> On Behalf
> > Of qwasty
> > Sent: Tuesday, October 14, 2008 10:47 AM
> > To: AT_Sprint@yahoogroups.com <mailto:AT_Sprint
%40yahoogroups.com>
> > Subject: [AT_Sprint] Re: Ultimatic vs. Iambic Keying
> >
> >
> >
> > I'm not a CW operator yet, but after reading a bit about iambic
and
> > ultimatic keying, I have to second this request. Ultimatic keying
> > seems much simpler and more useful. Less attention and thinking
is
> > required, so higher speeds can be achieved. I knew nothing about
> > ultimatic keying until reading this post, but now it seems
strange
> > that anyone would try to do anything different from ultimatic
> keying.
> >
> > Where can I get an ultimatic keyer?
> >
> > --- In AT_Sprint@yahoogroups.com <mailto:AT_Sprint
%40yahoogroups.com>
> <mailto:AT_Sprint
> %40yahoogroups.com> ,
> > "k5jfp" <w5zl@> wrote:
> > >
> > > I'm a newbie here - just recently got my ATS3B going - still
> > tweaking.
> > > I am old school in CW keying, and can send great CW up to

> probably
> > 50
> > > wpm with my trusty single-action paddle and Ultimatic keying.
Put
> me
> > > in front of a modern dual-action (squeeze) paddle with Iambic
> keying
> > > and I am a total lid. Has anyone considered an option for
> Ultimatic
> > > keying in the ATS3B? That would sure make life easier for me,
> since
> > > the paddle I now use is dual-action (the Palm mini).
> > >
> > > Thanks,
> > >
> > > Gary W5ZL
> > >
> >
>

3660. RE: [AT_Sprint] Re: Ultimatic vs. Iambic Keying

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-15 04:32:10 UTC
From: Ken Lotts
Topic: 3627 Message: 3660

Ha-ha
You know, I did play around trying to get a good shot but I cant remember exactly how I did it.. I am sure the camera was strapped around my neck.. I will have to look on my hard drive for clues.
There are some better integrated paddles designs than mine. The best that I have seen is an AC plug that is integrated beautifully into the front of the altoids tin. Another is a guitar pick on the top. I cant remember all of them but they all looked a ton better than mine.

Here is a photo of the home made paddle before it was glued to the bottom of the tin..

http://www.flickr.com/photos/lotts-family/1393308551/

Ken
aa7jc

-----Original Message-----
From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com]On Behalf Of qwasty
Sent: Tuesday, October 14, 2008 8:17 PM
To: AT_Sprint@yahoogroups.com
Subject: [AT_Sprint] Re: Ultimatic vs. Iambic Keying

That's an amazing photo. How did you operate the camera with one hand on the radio and the other on the touch paddles? Surely that's a superior setup to any commercial solution.

I've been out of the hobby for many years, but maybe I'll be getting back into it soon. If I do, I want that...that thing...in the photo. I'll need to start by getting a soldering iron I guess.

You have any details on how you put the touch paddles and keyer together in your neat integrated package?

--- In AT_Sprint@yahoogroups.com, "ken Lotts \(at home\)" <ken@...> wrote:
>
> The mini paddle is an excellent paddle (I own one and love it) but the ATS3
> rig is a gram counters dream radio.. It's a real bulls eye for backpacking
> unless you need to haul around ton of accessories with it. That is why I
> (and several others) use integrated home made touch paddles.
>
>

>
> http://www.flickr.com/photos/lotts-family/2858603004/
>
>
>
>
>
> Ken
>
> Aa7jc
>
>
>
> From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com]
On Behalf
> Of qwasty
> Sent: Tuesday, October 14, 2008 3:18 PM
> To: AT_Sprint@yahoogroups.com
> Subject: [AT_Sprint] Re: Ultimatic vs. Iambic Keying
>
>
>
> I have some research to report.
>
> George Carey Fuller, KX0R, recommended the Palm Radio Mini Paddle
in
> his eham.net review of the Elecraft KX1. It looks like the ideal
> portable CW key.
>
> http://www.eham.net/reviews/detail/3586?page=2
> http://www.mtechnologies.com/palm/
>
> I noticed that Palm Radio Code Cube is a tiny keyer that plugs into
> the back of the Mini Paddle.
>
> http://www.mtechnologies.com/palm/cc.htm
>
> The product webpage does not mention what keying modes it can do,
but
> it does mention that it uses a Jackson Harbor Press PK4 keyer chip.
> Further research showed that the Jackson Harbor chip is actually
the
> latest PK-4 SSR chip, and, here's the best part, the chip does
> Ultimatic keying.
>
> http://home.att.net/~jacksonharbor/pk4ssr.htm
>
> So, you got your hardy little Palm Radio Mini Paddle with the
> optional Code Cube, and you have Ultimatic mode keying in a tiny
> rugged package, ideally suited to portable or backpack use with the

> KD1JV ATS-3B QRP radio. So, it looks like this problem is solved.
All
> that's left to do is try it.
>
> --- In AT_Sprint@yahoogroups.com <mailto:AT_Sprint
%40yahoogroups.com> , "ken
> Lotts \(at home\)" <ken@>
> wrote:
> >
> > The K1EL keyers have ultimatic mode. I have a K40 ..
> >
> > http://k1el.tripod.com/
> >
> >
> >
> > FWIW,
> >
> > I never knew how bent I was on needing Iambic mode B until I
tried
> using the
> > ats3 iambic mode A.
> >
> > My sending (in mode A and even the previously broken mode B) was
> such an
> > embarrassment that I hardly ever used the ATS3 on the air.
> >
> > I recently went into the firmware and made sure I never
> accidentally ever
> > select mode A again.
> >
> >
> >
> > Ken
> >
> > aa7jc
> >
> >
> >
> > From: AT_Sprint@yahoogroups.com <mailto:AT_Sprint
%40yahoogroups.com>
> [mailto:AT_Sprint@yahoogroups.com <mailto:AT_Sprint
%40yahoogroups.com>]
> On Behalf
> > Of qwasty
> > Sent: Tuesday, October 14, 2008 10:47 AM
> > To: AT_Sprint@yahoogroups.com <mailto:AT_Sprint
%40yahoogroups.com>
> > Subject: [AT_Sprint] Re: Ultimatic vs. Iambic Keying
> >
> >

> >
> > I'm not a CW operator yet, but after reading a bit about iambic
and
> > ultimatic keying, I have to second this request. Ultimatic keying
> > seems much simpler and more useful. Less attention and thinking
is
> > required, so higher speeds can be achieved. I knew nothing about
> > ultimatic keying until reading this post, but now it seems
strange
> > that anyone would try to do anything different from ultimatic
> keying.
> >
> > Where can I get an ultimatic keyer?
> >
> > --- In AT_Sprint@yahoogroups.com <mailto:AT_Sprint
%40yahoogroups.com>
> <mailto:AT_Sprint
> %40yahoogroups.com> ,
> > "k5jfp" <w5zl@> wrote:
> > >
> > > I'm a newbie here - just recently got my ATS3B going - still
> > tweaking.
> > > I am old school in CW keying, and can send great CW up to
> probably
> > 50
> > > wpm with my trusty single-action paddle and Ultimatic keying.
Put
> me
> > > in front of a modern dual-action (squeeze) paddle with Iambic
> keying
> > > and I am a total lid. Has anyone considered an option for
> Ultimatic
> > > keying in the ATS3B? That would sure make life easier for me,
> since
> > > the paddle I now use is dual-action (the Palm mini).
> > >
> > > Thanks,
> > >
> > > Gary W5ZL
> > >
> >
>

3661. Touch Keyer

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-15 04:35:21 UTC
From: kc7fys
Topic: 3661 Message: 3661

And there's mine--which is somewhat of a copy of Ken's nice design.
<http://jp.youtube.com/watch?v=yqnt2zUpJcw>
or photos
<http://www.flickr.com/photos/jonathancharles/2291295848/>
I still prefer external paddles, but I have saved a few QSOs when
something wasn't right with the paddles by hitting the touchkeyer.
Jonathan KC7FYS

3662. Re: Ultimatic vs. Iambic Keying

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-15 05:04:15 UTC
From: radio_kx0r
Topic: 3627 Message: 3662

--- In AT_Sprint@yahoogroups.com, "ken Lotts \(at home\)" <ken@...>
wrote:

Ken,

Do you think there are problems in the ATS3 (or ATS-3B, etc) Mode A
programming?

I'm one of those people that can't deal with Mode B. I've tried it
with other keyers and I don't like it. I just don't get it or see
the point. I would rather use single lever than fight with Mode B.

But, I've noticed that the Mode A on the ATS-3A and ATS-3B seems a
little rough in some way, but I can't put my finger on it. I just
seem to make more timing errors and get extra dits, stuff like that.
I have a hard time using the iambic squeeze feature without getting
an additional dit or dah, etc. I often end up sending without
squeezing both levers, in effect, single lever sending, to avoid
errors.

Is this me, or is there something slightly off in the way the keying
is timed or programmed? I don't go very fast - 20 WPM average. I
know there was/is a problem with Mode B.

I think my CMOS 4 keyer sends easier in Mode A, and even my TICK 4
and K10 keyers seem better - whatever it is must be subtle.

I like the idea of using an external keyer like the PALM - we also
could probably wire a TICK or a K10 into the box, silly as that
seems. Any experts out there?

Thanks

Carey
KX0R

>
> The K1EL keyers have ultimatic mode. I have a K40 ..
>
> http://k1el.tripod.com/
>
>
>
> FWIW,
>
> I never knew how bent I was on needing Iambic mode B until I tried
using the

> ats3 iambic mode A.
>
> My sending (in mode A and even the previously broken mode B) was
such an
> embarrassment that I hardly ever used the ATS3 on the air.
>
> I recently went into the firmware and made sure I never
accidentally ever
> select mode A again.
>
>
>
> Ken
>
> aa7jc
>
>
>
> From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com]
On Behalf
> Of qwasty
> Sent: Tuesday, October 14, 2008 10:47 AM
> To: AT_Sprint@yahoogroups.com
> Subject: [AT_Sprint] Re: Ultimatic vs. Iambic Keying
>
>
>
> I'm not a CW operator yet, but after reading a bit about iambic and
> ultimatic keying, I have to second this request. Ultimatic keying
> seems much simpler and more useful. Less attention and thinking is
> required, so higher speeds can be achieved. I knew nothing about
> ultimatic keying until reading this post, but now it seems strange
> that anyone would try to do anything different from ultimatic
keying.
>
> Where can I get an ultimatic keyer?
>
> --- In AT_Sprint@yahoogroups.com <mailto:AT_Sprint%
40yahoogroups.com> ,
> "k5jfp" <w5zl@> wrote:
> >
> > I'm a newbie here - just recently got my ATS3B going - still
> tweaking.
> > I am old school in CW keying, and can send great CW up to
probably
> 50
> > wpm with my trusty single-action paddle and Ultimatic keying. Put
me
> > in front of a modern dual-action (squeeze) paddle with Iambic
keying

> > and I am a total lid. Has anyone considered an option for
Ultimatic
> > keying in the ATS3B? That would sure make life easier for me,
since
> > the paddle I now use is dual-action (the Palm mini).
> >
> > Thanks,
> >
> > Gary W5ZL
> >
>

3663. Looking for a AT3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-15 09:26:32 UTC
From: hb9tso
Topic: 3663 Message: 3663

Has someone a unbuilt ATS3B kit available?

Let me know via SMS 0141 78 707 37 68 (from US) or

0041 78 707 37 68 from other areas

or send me a mail: hb9tso@...

72 de Rolf

3664. RE: [AT_Sprint] Re: Ultimatic vs. Iambic Keying

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-15 12:52:59 UTC
From: Ken Lotts
Topic: 3627 Message: 3664

Well..
I cut my teeth on the old bencher with a built in MFJ keyer.. maybe that's what messed me up so bad.
Mode A was never my strong mode but I never had an absolute intolerance for it until I built the ATS3.. I think my CQ turns into NQ or something like that.
For a while, I had huge problems even with mode B on the ATS3. The W1MT firmware seems to have made a big difference in the mode B so I really have no issues with it any more (thanks Mike!).

My Sierra and my K2 built in keyer are no problem for me.

The CMOS-4 has been a long time favorite keyer for my home station equipment that needs it except for its pathetic raspy side tone (which I turn off anyways).. My MFJ-459 keyer has a very nice side tone and it keys nicely but it is has a bunch of engineering goofs that counter its asking price of $179. If you are interested you can see my review at http://www.eham.net/reviews/detail/3763 (just look for AA7JC).

Ken aa7jc

-----Original Message-----
From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com]On Behalf Of radio_kx0r
Sent: Tuesday, October 14, 2008 10:04 PM
To: AT_Sprint@yahoogroups.com
Subject: [AT_Sprint] Re: Ultimatic vs. Iambic Keying

--- In AT_Sprint@yahoogroups.com, "ken Lotts \(at home\)" <ken@...> wrote:

Ken,

Do you think there are problems in the ATS3 (or ATS-3B, etc) Mode A programming?

I'm one of those people that can't deal with Mode B. I've tried it with other keyers and I don't like it. I just don't get it or see the point. I would rather use single lever than fight with Mode B.

But, I've noticed that the Mode A on the ATS-3A and ATS-3B seems a little rough in some way, but I can't put my finger on it. I just seem to make more timing errors and get extra dits, stuff like that. I have a hard time using the iambic squeeze feature without getting an additional dit or dah, etc. I often end up sending without squeezing both levers, in effect, single lever sending, to avoid errors.

Is this me, or is there something slightly off in the way the keying is timed or programmed? I don't go very fast - 20 WPM average. I know there was/is a problem with Mode B.

I think my CMOS 4 keyer sends easier in Mode A, and even my TICK 4 and K10 keyers seem better - whatever it is must be subtle.

I like the idea of using an external keyer like the PALM - we also could probably wire a TICK or a K10 into the box, silly as that seems. Any experts out there?

Thanks

Carey
KX0R

>
> The K1EL keyers have ultimatic mode. I have a K40 ..
>
> http://k1el.tripod.com/
>
>
>
> FWIW,
>
> I never knew how bent I was on needing Iambic mode B until I tried using the
> ats3 iambic mode A.
>
> My sending (in mode A and even the previously broken mode B) was such an
> embarrassment that I hardly ever used the ATS3 on the air.
>
> I recently went into the firmware and made sure I never accidentally ever
> select mode A again.
>
>
>
> Ken
>
> aa7jc
>
>
>
> From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com] On Behalf
> Of qwasty
> Sent: Tuesday, October 14, 2008 10:47 AM
> To: AT_Sprint@yahoogroups.com
> Subject: [AT_Sprint] Re: Ultimatic vs. Iambic Keying
>

>
>
> I'm not a CW operator yet, but after reading a bit about iambic and
> ultimatic keying, I have to second this request. Ultimatic keying
> seems much simpler and more useful. Less attention and thinking is
> required, so higher speeds can be achieved. I knew nothing about
> ultimatic keying until reading this post, but now it seems strange
> that anyone would try to do anything different from ultimatic
keying.
>
> Where can I get an ultimatic keyer?
>
> --- In AT_Sprint@yahoogroups.com <mailto:AT_Sprint%
40yahoogroups.com> ,
> "k5jfp" <w5zl@> wrote:
> >
> > I'm a newbie here - just recently got my ATS3B going - still
> tweaking.
> > I am old school in CW keying, and can send great CW up to
probably
> 50
> > wpm with my trusty single-action paddle and Ultimatic keying. Put
me
> > in front of a modern dual-action (squeeze) paddle with Iambic
keying
> > and I am a total lid. Has anyone considered an option for
Ultimatic
> > keying in the ATS3B? That would sure make life easier for me,
since
> > the paddle I now use is dual-action (the Palm mini).
> >
> > Thanks,
> >
> > Gary W5ZL
> >
>

3665. RE: [AT_Sprint] Re: Ultimatic, Iambic Keying, et al.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-16 21:09:37 UTC
From: Michael Harnage
Topic: 3627 Message: 3665

Thanks Ken. I worked with several high speed ops and another programmer to get the iambic modes working "properly" for my version of the firmware. (Note: I have not ported the improved iambic stuff to the ATS2/3/3A yet.)

On the topic of iambic keying: There is no single "standard". One can only try to find as much information as is available, then try to come up with an algorithm that satisfies the most people. It was only recently (within the last year) that there was an interest in improving the "feel" of the keying in the ATS rigs. With the help of some high speed ops that is what I did for my version. They seem to like it. Steve is more than welcome to incorporate what I did in his code as well.

On the topic of ultimatic: my impression is that not many folks use it. This thread is the first time I have heard of someone using it. My thinking is similiar to Jim Miller's. Why add it in the firmware, when you can do it mechanically with a single lever paddle or a dual paddle used as a single lever paddle with an iambic keyer? That said, if you are interested in ultimatic keying please let me know, either on list or via private email and if there is enough interest, I will see about adding it to my version of the firmware.

Couple of things I try to keep in mind when deciding what to add to my firmware:

#1: Is it something that I want? (Not an absolute, but afterall, this is how my interest in the firmware started.)

#2: Does it add too much? (This is a minimalist rig. Too many features will make it too complicated and then not attractive to its target audience.)

Back when the MPU was limited to 4K bytes adding ultimatic would not even be considered. But now with 8K bytes, it is in the possible catagory.

Caveat: I speak only for myself and reserve the right to put my wife, kids, and job first. In other words, any changes might take a while. :)

-mike/w1mt

--- On Wed, 10/15/08, Ken Lotts <ken@...> wrote:

Mode A was never my strong mode but I never had an absolute intolerance for it until I built the ATS3.. I think my CQ turns into NQ or something like that.
For a while, I had huge problems even with mode B on the ATS3. The W1MT firmware seems to have made a big difference in the mode B so I really have no issues with it any more (thanks Mike!).

3666. Re: Ultimatic, Iambic Keying, et al.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-17 01:41:35 UTC
From: k5jfp
Topic: 3627 Message: 3666

Wow, great to see this thread finally light up. I started it several days ago and was afraid it was doomed to total disregard.

I recognize that I'm something of a relic - a high speed Ultimatic op. After years of blissful ultimatic operation, when iambic keying and double-action paddles came along I didn't feel compelled to switch over since I was fat, dumb, happy and pretty proficient with my old stuff. As I got back into contesting actively about five years ago and started guest op'ing at modern stations I found I was distinctly in the minority with my non-iambic ways, and in fact was downright clumsy trying to use their dual action paddles and iambic keyers. Clumsy is probably too kind. I was (and am) terrible at it.

Now to my new ATS3B and Palm mini. I bought the Palm so I could travel light - why else have a radio in an Altoids can? The Palm's a super paddle, but it's dual action, and when hooked up to an iambic keyer it's Lidville for me. BTW, as has been pointed out in a previous message, I'm good to go with a single-action paddle and an iambic keyer. It's basically ultimatic (the keyer can't see both a dit and dah key closure simultaneously). To use the ATS3B that way, however, I can't carry my streamlined little Palm paddle. There's the dilema. The other alternative suggested was to use an outboard keyer that can run ultimatic. Same problem - more junk to haul - not the reason you play in the Altoids League.

If you find it possible to mod the code to add ultimatic it would be spectacular. I know I'm not the last living ultimatic user, but admit I may be part of a dying breed - then aren't we all?

Thanks for considering it Mike!

73,

Gary W5ZL

--- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@...> wrote:
>
> Thanks Ken. I worked with several high speed ops and another programmer to get the iambic modes working "properly" for my version of the firmware. (Note: I have not ported the improved iambic stuff to the ATS2/3/3A yet.)
>
> On the topic of iambic keying: There is no single "standard". One can only try to find as much information as is available, then try to come up with an algorithm that satisfies the most people. It was only recently (within the last year) that there was an interest in improving the "feel" of the keying in the ATS rigs. With the help of

some high speed ops that is what I did for my version. They seem to
like it. Steve is more than welcome to incorporate what I did in his
code as well.
>
> On the topic of ultimatic: my impression is that not many folks use
it. This thread is the first time I have heard of someone using it. My
thinking is similiar to Jim Miller's. Why add it in the firmware, when
you can do it mechanically with a single lever paddle or a dual paddle
used as a single lever paddle with an iambic keyer? That said, if you
are interested in ultimatic keying please let me know, either on list
or via private email and if there is enough interest, I will see about
adding it to my version of the firmware.
>
> Couple of things I try to keep in mind when deciding what to add to
my firmware:
>
> #1: Is it something that I want? (Not an absolute, but afterall,
this is how my interest in the firmware started.)
>
> #2: Does it add too much? (This is a minimalist rig. Too many
features will make it too complicated and then not attractive to its
target audience.)
>
> Back when the MPU was limited to 4K bytes adding ultimatic would not
even be considered. But now with 8K bytes, it is in the possible catagory.
>
> Caveat: I speak only for myself and reserve the right to put my
wife, kids, and job first. In other words, any changes might take a
while. :)
>
> -mike/w1mt
>
> --- On Wed, 10/15/08, Ken Lotts <ken@...> wrote:
>
>
>
> Mode A was never my strong mode but I never had an
absolute intolerance for it until I built the ATS3.. I think my CQ
turns into NQ or something like that.
> For a while, I had huge problems even with mode B on the ATS3. The
W1MT firmware seems to have made a big difference in the mode B so I
really have no issues with it any more (thanks Mike!).
>
>

3667. Re: Ultimatic, Iambic Keying, et al.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-17 22:34:39 UTC
From: mpupeza
Topic: 3627 Message: 3667

Gary;
I read that using a single paddle in the Iambic Mode works very
similar to the Ultimatic mode.
I don't know that for fact, but I have used a single paddle key, made
from PC Board material as a miniature key for my ATS-3B and it does
work fine.
Even my Scorpions kit dual paddle key I use as a sideswiper, never
'squeezing', only 'slapping'. It never seemed a big deal to use
iambic for me!
73
Mike VE3EQP .....>

--- In AT_Sprint@yahoogroups.com, "k5jfp" <w5zl@...> wrote:
>
> Wow, great to see this thread finally light up. I started it several
> days ago and was afraid it was doomed to total disregard.
>
> I recognize that I'm something of a relic - a high speed Ultimatic
op.
> After years of blissful ultimatic operation, when iambic keying and
> double-action paddles came along I didn't feel compelled to switch
> over since I was fat, dumb, happy and pretty proficient with my old
> stuff. As I got back into contesting actively about five years ago
and
> started guest op'ing at modern stations I found I was distinctly in
> the minority with my non-iambic ways, and in fact was downright
clumsy
> trying to use their dual action paddles and iambic keyers. Clumsy is
> probably too kind. I was (and am) terrible at it.
>
> Now to my new ATS3B and Palm mini. I bought the Palm so I could
travel
> light - why else have a radio in an Altoids can? The Palm's a super
> paddle, but it's dual action, and when hooked up to an iambic keyer
> it's Lidville for me. BTW, as has been pointed out in a previous
> message, I'm good to go with a single-action paddle and an iambic
> keyer. It's basically ultimatic (the keyer can't see both a dit and
> dah key closure simultaneously). To use the ATS3B that way,
however, I
> can't carry my streamlined little Palm paddle. There's the dilema.
The
> other alternative suggested was to use an outboard keyer that can
run
> ultimatic. Same problem - more junk to haul - not the reason you
play

> in the Altoids League.
>
> If you find it possible to mod the code to add ultimatic it would be
> spectacular. I know I'm not the last living ultimatic user, but
admit
> I may be part of a dying breed - then aren't we all?
>
> Thanks for considering it Mike!
>
> 73,
>
> Gary W5ZL
>

3668. Re: [AT_Sprint] Re: Ultimatic, Iambic Keying, et al.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-17 23:24:37 UTC
From: Michael Harnage
Topic: 3627 Message: 3668

I had a little time tonight and coded up Ultimatic mode in my firmware. If anyone wants to test it let me know and I will send it to you to try out.

-mike/w1mt

_____
Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

3669. Re: FS: ATS 3b - new and unopened in bag

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-18 14:31:03 UTC
From: hb9tso
Topic: 3632 Message: 3669

--- In AT_Sprint@yahoogroups.com, "g0azs" <marc.g0azs@...> wrote:
>
> Hi All
>
> I just don't have the time to build my ATS-3b and I would rather
> someone else could enjoy it.
>
> I will happily sell it for what I paid - $200 (or equivalent) plus
> shipping costs to wherever you are (Note: I am in the UK).
>
> Please reply directly to me if interested.
>
> 73 Marc G0AZS
>

Dear Marc

Is your kit still available?

Let me know

73 de Rolf

3670. Re: Ultimatic, Iambic Keying, et al.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-18 17:38:11 UTC
From: qwasty
Topic: 3627 Message: 3670

You can't be part of a dying breed if I, a potential new CW op, am interested in gaining CW skills with ultimatic keying. I don't have a radio, a key, or anything. In fact, I've been out of the hobby for around a decade, and it's the ATS-3B that's sparked my interest again. I learned CW many years ago to get my license (and now forgotten it), but the main reason I'm interested in the ATS-3B is for its digital capability. Nonetheless, I plan on using CW also so I can get the most out of it when I'm without a computer.

About the ATS-3, AE5X says "This is one of the most impressive radios I've owned or heard about in my almost 27 years of being in the hobby". That's a pretty powerful statement - enough to catch the attention of any gadget lover.

http://www.ae5x.com/ats3.html

I used to be pretty good at handling SMT / SMD surface mount soldering, but things have changed, and I no longer have any equipment. Once I've saved a little money, I'll probably try to buy an assembled and tested radio, with built in key if possible, so I can get into it without the expense of the solder station. I'm on a VERY tight budget.

--- In AT_Sprint@yahoogroups.com, "k5jfp" <w5zl@...> wrote:
>
> Wow, great to see this thread finally light up. I started it several
> days ago and was afraid it was doomed to total disregard.
>
> I recognize that I'm something of a relic - a high speed Ultimatic
op.
> After years of blissful ultimatic operation, when iambic keying and
> double-action paddles came along I didn't feel compelled to switch
> over since I was fat, dumb, happy and pretty proficient with my old
> stuff. As I got back into contesting actively about five years ago
and
> started guest op'ing at modern stations I found I was distinctly in
> the minority with my non-iambic ways, and in fact was downright
clumsy
> trying to use their dual action paddles and iambic keyers. Clumsy is
> probably too kind. I was (and am) terrible at it.
>
> Now to my new ATS3B and Palm mini. I bought the Palm so I could
travel
> light - why else have a radio in an Altoids can? The Palm's a super
> paddle, but it's dual action, and when hooked up to an iambic keyer
> it's Lidville for me. BTW, as has been pointed out in a previous

> message, I'm good to go with a single-action paddle and an iambic
> keyer. It's basically ultimatic (the keyer can't see both a dit and
> dah key closure simultaneously). To use the ATS3B that way,
however, I
> can't carry my streamlined little Palm paddle. There's the dilema.
The
> other alternative suggested was to use an outboard keyer that can
run
> ultimatic. Same problem - more junk to haul - not the reason you
play
> in the Altoids League.
>
> If you find it possible to mod the code to add ultimatic it would be
> spectacular. I know I'm not the last living ultimatic user, but
admit
> I may be part of a dying breed - then aren't we all?
>
> Thanks for considering it Mike!
>
> 73,
>
> Gary W5ZL
>
> --- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@> wrote:
> >
> > Thanks Ken. I worked with several high speed ops and another
> programmer to get the iambic modes working "properly" for my version
> of the firmware. (Note: I have not ported the improved iambic stuff
to
> the ATS2/3/3A yet.)
> >
> > On the topic of iambic keying: There is no single "standard". One
> can only try to find as much information as is available, then try
to
> come up with an algorithm that satisfies the most people. It was
only
> recently (within the last year) that there was an interest in
> improving the "feel" of the keying in the ATS rigs. With the help of
> some high speed ops that is what I did for my version. They seem to
> like it. Steve is more than welcome to incorporate what I did in his
> code as well.
> >
> > On the topic of ultimatic: my impression is that not many folks
use
> it. This thread is the first time I have heard of someone using it.
My
> thinking is similiar to Jim Miller's. Why add it in the firmware,
when
> you can do it mechanically with a single lever paddle or a dual
paddle

> used as a single lever paddle with an iambic keyer? That said, if
you
> are interested in ultimatic keying please let me know, either on
list
> or via private email and if there is enough interest, I will see
about
> adding it to my version of the firmware.
> >
> > Couple of things I try to keep in mind when deciding what to add
to
> my firmware:
> >
> > #1: Is it something that I want? (Not an absolute, but afterall,
> this is how my interest in the firmware started.)
> >
> > #2: Does it add too much? (This is a minimalist rig. Too many
> features will make it too complicated and then not attractive to its
> target audience.)
> >
> > Back when the MPU was limited to 4K bytes adding ultimatic would
not
> even be considered. But now with 8K bytes, it is in the possible
catagory.
> >
> > Caveat: I speak only for myself and reserve the right to put my
> wife, kids, and job first. In other words, any changes might take a
> while. :)
> >
> > -mike/w1mt
> >
> > --- On Wed, 10/15/08, Ken Lotts <ken@> wrote:
> >
> >
> >
> > Mode A was never my strong mode but I never had an
> absolute intolerance for it until I built the ATS3.. I think my CQ
> turns into NQ or something like that.
> > For a while, I had huge problems even with mode B on the ATS3.
The
> W1MT firmware seems to have made a big difference in the mode B so I
> really have no issues with it any more (thanks Mike!).
> >
> >
>

3671. Run For the Bacon - Sunday night!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-19 00:59:54 UTC
From: Larry Makoski W2LJ
Topic: 3671 Message: 3671

Hello everyone!

Holy cow! Is it the third Sunday in October already? Where's the time going to?

The Flying Pig's monthly "Run For the Bacon" QRP CW contest is this Sunday night! The last one before Halloween and the last one before Election Day and the last one for this year in Daylight Savings Time!

This friendly, low pressure, 2 hour sprint runs from 9:00 to 11:00 PM Eastern DST.

For all the details, please visit http://www.fpqrp.com/fpqrprun.php

The Flying Pigs QRP ARCI is now maintaining an archive of previous "pig-runs" for your viewing pleasure.

See you in the troughs!

73 de Larry W2LJ
FP# 612

3672. How to remove oxide from board?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-19 10:54:22 UTC
From: spitleaf
Topic: 3672 Message: 3672

Hello all,

I was going to continue building the ATS-3b after a few months on the shelf. The board had oxidized at some places and that has to be taken care of before I can start soldering. My question is, what is the easiest way to remove the oxide?

Thanks,

Alex

3673. Building ATS-3b

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-19 11:35:13 UTC
From: Milan
Topic: 3673 Message: 3673

After one year of received the kit I am in situation to alignment it.
Wish to use Cash Olsen metod, question is which parts to pu in first
and is there some alignment procedure, put in heat - put in heat ?.
Milan
PS. this is my fist project with SMD.

3674. Re: [AT_Sprint] How to remove oxide from board?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-19 13:23:35 UTC
From: ehydra
Topic: 3672 Message: 3674

A glass-fiber pencil.

- Henry

spitleaf schrieb:
> Hello all,
>
> I was going to continue building the ATS-3b after a few months on the
> shelf. The board had oxidized at some places and that has to be taken
> care of before I can start soldering. My question is, what is the
> easiest way to remove the oxide?
>
> Thanks,
>
> Alex
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>
>

--
www.ehydra.dyndns.info

3675. Run for the Bacon, 10/19/2008, 6:00 pm

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-20 00:41:53 UTC
From: AT_Sprint@yahoogroups.com
Topic: 3675 Message: 3675

Reminder from: AT_Sprint Yahoo! Group
http://groups.yahoo.com/group/AT_Sprint/cal

Run for the Bacon
Sunday October 19, 2008
6:00 pm - 8:00 pm
(This event repeats every month on the third Sunday.)
Location: Your shack or anywhere

Notes:
This Sunday evening, the Flying Pigs Amateur Radio Club International will be holding its monthly Run For The Bacon. This is a friendly, two hour QRP CW Sprint, which is open to ALL radio amateurs, will last from 9:00 - 11:00PM EDT (0200-0400 UTC Monday).

You may work stations once per band on 160, 80, 40, 20, 15 or 10 Meters. Suggested starting frequencies are 1.812, 3.562, 7.044, 14.062, 21.062, and 28.062 MHz.

The exchange is RST, S/P/C (State, Province, Country) and Flying Pigs membership number. If you're not a member of the Flying Pigs, and would like to be; then please cli

All Rights Reserved
Copyright ? 2008
Yahoo! Inc.
http://www.yahoo.com

Privacy Policy:
http://privacy.yahoo.com/privacy/us

Terms of Service:
http://docs.yahoo.com/info/terms/

3676. Re: Ultimatic, Iambic Keying, et al.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-20 20:44:17 UTC
From: k5jfp
Topic: 3627 Message: 3676

I think my biggest problem with iambic is that I was already deeply entrenched in ultimatic technique, and trying to change was something akin for me to learning how to write left-handed after spending most of my life writing right-handed. My advice to you, since the manufacturers of most modern day radios assume all us ultimatic relics have passed on to the big paddle in the sky, would be to "go with the flow". Since you don't have anything to un-learn, just get yourself one of any number of dual-action paddles and start from day one to send iambic. You won't have missed anything, and won't spend time like I do on bended knee begging for workarounds to a problem you don't have to have.

Glad to have a "new" CW op coming into the fold. All you have to do is tune across the bands to know that CW is still very much alive and well. Watch the scope on a modern radio on a major contest weekend and you'll be hard pressed to find a hole anywhere!

I would also suggest (though my build job was FAR from perfect) that it's possible to do a respectable job of building an ATS3B without an expensive solder station. You DO need good eyes, good lighting, a steady hand, fine tweezers, solder wick (copper braid) and some magnification assistance to build the radio. If you don't have a soldering iron at all, for under $80 you can buy an ESD-grounded, fine-tipped variable temperature iron (like a Hakko 936) that will put you in the soldering big leagues, but you can get by with a lot less.

73,

Gary W5ZL

--- In AT_Sprint@yahoogroups.com, "qwasty" <qwasty@...> wrote:
>
> You can't be part of a dying breed if I, a potential new CW op, am
> interested in gaining CW skills with ultimatic keying. I don't have a
> radio, a key, or anything. In fact, I've been out of the hobby for
> around a decade, and it's the ATS-3B that's sparked my interest
> again. I learned CW many years ago to get my license (and now
> forgotten it), but the main reason I'm interested in the ATS-3B is
> for its digital capability. Nonetheless, I plan on using CW also so I
> can get the most out of it when I'm without a computer.
>
> About the ATS-3, AE5X says "This is one of the most impressive radios
> I've owned or heard about in my almost 27 years of being in the
> hobby". That's a pretty powerful statement - enough to catch the
> attention of any gadget lover.
>

> http://www.ae5x.com/ats3.html
>
> I used to be pretty good at handling SMT / SMD surface mount
> soldering, but things have changed, and I no longer have any
> equipment. Once I've saved a little money, I'll probably try to buy
> an assembled and tested radio, with built in key if possible, so I
> can get into it without the expense of the solder station. I'm on a
> VERY tight budget.
>
>
>
>
> --- In AT_Sprint@yahoogroups.com, "k5jfp" <w5zl@> wrote:
> >
> > Wow, great to see this thread finally light up. I started it several
> > days ago and was afraid it was doomed to total disregard.
> >
> > I recognize that I'm something of a relic - a high speed Ultimatic
> op.
> > After years of blissful ultimatic operation, when iambic keying and
> > double-action paddles came along I didn't feel compelled to switch
> > over since I was fat, dumb, happy and pretty proficient with my old
> > stuff. As I got back into contesting actively about five years ago
> and
> > started guest op'ing at modern stations I found I was distinctly in
> > the minority with my non-iambic ways, and in fact was downright
> clumsy
> > trying to use their dual action paddles and iambic keyers. Clumsy is
> > probably too kind. I was (and am) terrible at it.
> >
> > Now to my new ATS3B and Palm mini. I bought the Palm so I could
> travel
> > light - why else have a radio in an Altoids can? The Palm's a super
> > paddle, but it's dual action, and when hooked up to an iambic keyer
> > it's Lidville for me. BTW, as has been pointed out in a previous
> > message, I'm good to go with a single-action paddle and an iambic
> > keyer. It's basically ultimatic (the keyer can't see both a dit and
> > dah key closure simultaneously). To use the ATS3B that way,
> however, I
> > can't carry my streamlined little Palm paddle. There's the dilema.
> The
> > other alternative suggested was to use an outboard keyer that can
> run
> > ultimatic. Same problem - more junk to haul - not the reason you
> play
> > in the Altoids League.
> >
> > If you find it possible to mod the code to add ultimatic it would be
> > spectacular. I know I'm not the last living ultimatic user, but
> admit

> > I may be part of a dying breed - then aren't we all?
> >
> > Thanks for considering it Mike!
> >
> > 73,
> >
> > Gary W5ZL
> >
> > --- In AT_Sprint@yahoogroups.com, Michael Harnage <w1mt@> wrote:
> > >
> > > Thanks Ken. I worked with several high speed ops and another
> > programmer to get the iambic modes working "properly" for my version
> > of the firmware. (Note: I have not ported the improved iambic stuff
> to
> > the ATS2/3/3A yet.)
> > >
> > > On the topic of iambic keying: There is no single "standard". One
> > can only try to find as much information as is available, then try
> to
> > come up with an algorithm that satisfies the most people. It was
> only
> > recently (within the last year) that there was an interest in
> > improving the "feel" of the keying in the ATS rigs. With the help of
> > some high speed ops that is what I did for my version. They seem to
> > like it. Steve is more than welcome to incorporate what I did in his
> > code as well.
> > >
> > > On the topic of ultimatic: my impression is that not many folks
> use
> > it. This thread is the first time I have heard of someone using it.
> My
> > thinking is similiar to Jim Miller's. Why add it in the firmware,
> when
> > you can do it mechanically with a single lever paddle or a dual
> paddle
> > used as a single lever paddle with an iambic keyer? That said, if
> you
> > are interested in ultimatic keying please let me know, either on
> list
> > or via private email and if there is enough interest, I will see
> about
> > adding it to my version of the firmware.
> > >
> > > Couple of things I try to keep in mind when deciding what to add
> to
> > my firmware:
> > >
> > > #1: Is it something that I want? (Not an absolute, but afterall,
> > this is how my interest in the firmware started.)
> > >

> > > #2: Does it add too much? (This is a minimalist rig. Too many
> > features will make it too complicated and then not attractive to its
> > target audience.)
> > >
> > > Back when the MPU was limited to 4K bytes adding ultimatic would
> not
> > even be considered. But now with 8K bytes, it is in the possible
> catagory.
> > >
> > > Caveat: I speak only for myself and reserve the right to put my
> > wife, kids, and job first. In other words, any changes might take a
> > while. :)
> > >
> > > -mike/w1mt
> > >
> > > --- On Wed, 10/15/08, Ken Lotts <ken@> wrote:
> > >
> > >
> > >
> > > Mode A was never my strong mode but I never had an
> > absolute intolerance for it until I built the ATS3.. I think my CQ
> > turns into NQ or something like that.
> > > For a while, I had huge problems even with mode B on the ATS3.
> The
> > W1MT firmware seems to have made a big difference in the mode B so I
> > really have no issues with it any more (thanks Mike!).
> > >
> > >
> > >
> >
>

3677. RE: [AT_Sprint] Re: Ultimatic, Iambic Keying, et al.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-20 23:08:52 UTC
From: Dale Putnam
Topic: 3627 Message: 3677

I think.. just maybe... with all the input about the different keying... I just may have found out
why... after so many years... why exactly the little homebrew - 7 IC - battery powered - relay output keyer in a bud box with sidetone and built in paddles... all for the new key enthusiast...
me ... didn't work right... try as hard as I could... and did... ruined ... oh I don't really know.. but at least a hundred or even more.. sets of ears, trying to make a little sense of what I was sending, just couldn't do it. Then, after a whole bunch of months... and finally.. finally... I found at a hamfest somewhere... a cute litte keyer.... brandy new, well sorta... then... was a new style keyer.. and the fellow didn't want it... but I suspect... just maybe... he may have been one to have heard me.. on the air... limping along. Well anyway.. here he is, with this " new fangled thing.. can't make it work, would you give it a try?" situation.. I couldn't pass it up... price was right... and low ... it happened. ... Squeeze paddles.... so... suddenly... there came sweet, smooth, and pretty nice sounding, cw... from my own finners.. WOW!
Yep, sucked me in... since... I have tried most all.. keyers, keys... and even a TO keyer...
but you know.. the squeeze key works the best.... for me.
You don't suppose it has something to do with me being left handed... key with the right while typing or writing with the left? hmmmm.... and another question is born. --...
...--Dale - WC7S in Wy

_____
Stay organized with simple drag and drop from Windows Live Hotmail.
http://windowslive.com/Explore/hotmail?ocid=TXT_TAGLM_WL_hotmail_102008

3678. Pre-Drilled Enclosure

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-21 00:25:00 UTC
From: nwgarner
Topic: 3678 Message: 3678

Hello Everyone,
I've eaten way too many Altoids and have been through four iterations of drilling to get the holes right but it doesn't come out as I'd like it. I've since made an enclosure out of the rosewood you can get at Michael's but it's not very rigid. Is anyone selling an ATS-3B compatible enclosure, pre-drilled with a professional look? I'd like to be able to put a BNC connector in it as well.

Nick

3679. Re: [AT_Sprint] Pre-Drilled Enclosure

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-21 00:52:26 UTC
From: david gauding
Topic: 3678 Message: 3679

Nick,

I can't help on a pre-drilled enclosure but I've spent the last two weeks drilling lots of holes in Altoids tins to hold several antenna tuner prototypes. I've been pleased with the results of the drilling. Unfortunately, the tuner itself has a ways to go! <g>

I start by marking the hole location with a carbide tipped punch to keep the drill from wandering. I back the area to be punched with a piece of wood to keep bending to a minimum. I use the smallest drill and increase the diameter in steps until it matches the 1/8" tip on a 1/2" diameter Uni-Bit. Then I use a Unit-Bit to finish the hole.

It took me several attempts to realize that unless the Uni-Bit is running at top speed it grabs the thin metal of the tin with predictable results. Done right the holes perfectly round and the Uni-Bit does not wander.

I also have what machinists call an edge breaker. This rotary hand tool cleans-up the outside edge of the hole. For clearance reasons it won't clean-up holes drilled in the sides of the tin from the inside. For the inside sides I use a larger drill bit or a handloader's deburring tool.

Hope this is helpful until you find a pre-drilled enclosure.

Dave, NF0R

----- Original Message ----
From: nwgarner <nwgarner@...>
To: AT_Sprint@yahoogroups.com
Sent: Monday, October 20, 2008 7:25:00 PM
Subject: [AT_Sprint] Pre-Drilled Enclosure

Hello Everyone,
I've eaten way too many Altoids and have been through four iterations
of drilling to get the holes right but it doesn't come out as I'd like
it. I've since made an enclosure out of the rosewood you can get at
Michael's but it's not very rigid. Is anyone selling an ATS-3B
compatible enclosure, pre-drilled with a professional look? I'd like
to be able to put a BNC connector in it as well.

Nick

Yahoo! Groups Links

http://docs.yahoo.com/info/terms/

3680. Re: Pre-Drilled Enclosure

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-21 01:42:50 UTC
From: k5jfp
Topic: 3678 Message: 3680

I thought I had seen something about a CNC machined aluminum alternative to the trusty Altoids tin, and after a bit of a search found it. You can eat a lot of Altoids for the price (twenty-four bucks), but it looks like it might be pretty substantial:

http://www.americanmorse.com/aa1.htm

Legal Disclaimers: I've never seen one of these. I don't have a pecuniary interest of any kind. Your mileage may vary. Make a legal U-turn.

Gary W5ZL

--- In AT_Sprint@yahoogroups.com, david gauding <dgauding@...> wrote:
>
> Nick,
>
> I can't help on a pre-drilled enclosure but I've spent the last two weeks drilling lots of holes in Altoids tins to hold several antenna tuner prototypes. I've been pleased with the results of the drilling. Unfortunately, the tuner itself has a ways to go! <g>
>
> I start by marking the hole location with a carbide tipped punch to keep the drill from wandering. I back the area to be punched with a piece of wood to keep bending to a minimum. I use the smallest drill and increase the diameter in steps until it matches the 1/8" tip on a 1/2" diameter Uni-Bit. Then I use a Unit-Bit to finish the hole.
>
> It took me several attempts to realize that unless the Uni-Bit is running at top speed it grabs the thin metal of the tin with predictable results. Done right the holes perfectly round and the Uni-Bit does not wander.
>
> I also have what machinists call an edge breaker. This rotary hand tool cleans-up the outside edge of the hole. For clearance reasons it won't clean-up holes drilled in the sides of the tin from the inside. For the inside sides I use a larger drill bit or a handloader's deburring tool.
>
> Hope this is helpful until you find a pre-drilled enclosure.
>
>
> Dave, NF0R
>
>
>

>
> ----- Original Message ----
> From: nwgarner <nwgarner@...>
> To: AT_Sprint@yahoogroups.com
> Sent: Monday, October 20, 2008 7:25:00 PM
> Subject: [AT_Sprint] Pre-Drilled Enclosure
>
> Hello Everyone,
> I've eaten way too many Altoids and have been through four iterations
> of drilling to get the holes right but it doesn't come out as I'd like
> it. I've since made an enclosure out of the rosewood you can get at
> Michael's but it's not very rigid. Is anyone selling an ATS-3B
> compatible enclosure, pre-drilled with a professional look? I'd like
> to be able to put a BNC connector in it as well.
>
> Nick
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>
> http://docs.yahoo.com/info/terms/
>

3681. Re: Ultimatic, Iambic Keying, et al.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-21 04:39:33 UTC
From: qwasty
Topic: 3627 Message: 3681

If I understand you correctly, you don't think Ultimatic mode is good enough to be worth being different? By the way, I type with a Dvorak Typematrix keyboard, and I'm glad I ignored everyone that warned me away from being different. I won't touch a QWERTY anymore, no matter how many people's slimy hands have stickied it up. I'm surprised people think of that as being a point in favor of QWERTY, haha.

I take my Typematrix with me so I can type the way I want. I suppose I could do the same with a keyer, if it offers me something in return. A Typematrix Dvorak is definitely worth the hassle, since it doesn't hurt to type with it, but what about Ultimatic CW mode? Is it not that much better than Iambic in your opinion? It may be moot if I end up just doing my CW via keyboard. I'm not sure how much stamina I'll have sending by hand, but I'd like to try.

I used to use a fancy SMD SMT solder rework station, but that was so long ago, I can't even remember the name. Right now, I'm so poor I can't even afford a $10 second hand radioshack iron. I have a friend that has access to the local university labs though, and I bet I could get some favors there. We'll see.

--- In AT_Sprint@yahoogroups.com, "k5jfp" <w5zl@...> wrote:
>
> I think my biggest problem with iambic is that I was already deeply
> entrenched in ultimatic technique, and trying to change was something
> akin for me to learning how to write left-handed after spending most
> of my life writing right-handed. My advice to you, since the
> manufacturers of most modern day radios assume all us ultimatic relics
> have passed on to the big paddle in the sky, would be to "go with the
> flow". Since you don't have anything to un-learn, just get yourself

> one of any number of dual-action paddles and start from day one to
> send iambic. You won't have missed anything, and won't spend time like
> I do on bended knee begging for workarounds to a problem you don't
> have to have.
>
> Glad to have a "new" CW op coming into the fold. All you have to do is
> tune across the bands to know that CW is still very much alive and
> well. Watch the scope on a modern radio on a major contest weekend and
> you'll be hard pressed to find a hole anywhere!
>
> I would also suggest (though my build job was FAR from perfect) that
> it's possible to do a respectable job of building an ATS3B without an
> expensive solder station. You DO need good eyes, good lighting, a
> steady hand, fine tweezers, solder wick (copper braid) and some
> magnification assistance to build the radio. If you don't have a
> soldering iron at all, for under $80 you can buy an ESD-grounded,
> fine-tipped variable temperature iron (like a Hakko 936) that will put
> you in the soldering big leagues, but you can get by with a lot less.
>
> 73,
>
> Gary W5ZL
>
> --- In AT_Sprint@yahoogroups.com, "qwasty" <qwasty@> wrote:
> >
> > You can't be part of a dying breed if I, a potential new CW op, am
> > interested in gaining CW skills with ultimatic keying. I don't have a
> > radio, a key, or anything. In fact, I've been out of the hobby for
> > around a decade, and it's the ATS-3B that's sparked my interest
> > again. I learned CW many years ago to get my license (and now

> > forgotten it), but the main reason I'm
interested in the ATS-3B is
> > for its digital capability. Nonetheless, I
plan on using CW also so I
> > can get the most out of it when I'm without a
computer.
> >
> > About the ATS-3, AE5X says "This is one of
the most impressive radios
> > I've owned or heard about in my almost 27
years of being in the
> > hobby". That's a pretty powerful statement -
enough to catch the
> > attention of any gadget lover.
> >
> > http://www.ae5x.com/ats3.html
> >
> > I used to be pretty good at handling SMT /
SMD surface mount
> > soldering, but things have changed, and I no
longer have any
> > equipment. Once I've saved a little money,
I'll probably try to buy
> > an assembled and tested radio, with built in
key if possible, so I
> > can get into it without the expense of the
solder station. I'm on a
> > VERY tight budget.
> >
> >
> >
> >
> > --- In AT_Sprint@yahoogroups.com, "k5jfp"
<w5zl@> wrote:
> > >
> > > Wow, great to see this thread finally light
up. I started it several
> > > days ago and was afraid it was doomed to
total disregard.
> > >
> > > I recognize that I'm something of a relic -
a high speed Ultimatic
> > op.
> > > After years of blissful ultimatic
operation, when iambic keying and
> > > double-action paddles came along I didn't
feel compelled to switch
> > > over since I was fat, dumb, happy and
pretty proficient with my old
> > > stuff. As I got back into contesting

actively about five years ago
> > and
> > > started guest op'ing at modern stations I
found I was distinctly in
> > > the minority with my non-iambic ways, and
in fact was downright
> > clumsy
> > > trying to use their dual action paddles and
iambic keyers. Clumsy is
> > > probably too kind. I was (and am) terrible
at it.
> > >
> > > Now to my new ATS3B and Palm mini. I bought
the Palm so I could
> > travel
> > > light - why else have a radio in an Altoids
can? The Palm's a super
> > > paddle, but it's dual action, and when
hooked up to an iambic keyer
> > > it's Lidville for me. BTW, as has been
pointed out in a previous
> > > message, I'm good to go with a single-
action paddle and an iambic
> > > keyer. It's basically ultimatic (the keyer
can't see both a dit and
> > > dah key closure simultaneously). To use the
ATS3B that way,
> > however, I
> > > can't carry my streamlined little Palm
paddle. There's the dilema.
> > The
> > > other alternative suggested was to use an
outboard keyer that can
> > run
> > > ultimatic. Same problem - more junk to haul
- not the reason you
> > play
> > > in the Altoids League.
> > >
> > > If you find it possible to mod the code to
add ultimatic it would be
> > > spectacular. I know I'm not the last living
ultimatic user, but
> > admit
> > > I may be part of a dying breed - then
aren't we all?
> > >
> > > Thanks for considering it Mike!
> > >
> > > 73,

> > >
> > > Gary W5ZL
> > >
> > > --- In AT_Sprint@yahoogroups.com, Michael
Harnage <w1mt@> wrote:
> > > >
> > > > Thanks Ken. I worked with several high
speed ops and another
> > > programmer to get the iambic modes working
"properly" for my version
> > > of the firmware. (Note: I have not ported
the improved iambic stuff
> > to
> > > the ATS2/3/3A yet.)
> > > >
> > > > On the topic of iambic keying: There is
no single "standard". One
> > > can only try to find as much information as
is available, then try
> > to
> > > come up with an algorithm that satisfies
the most people. It was
> > only
> > > recently (within the last year) that there
was an interest in
> > > improving the "feel" of the keying in the
ATS rigs. With the help of
> > > some high speed ops that is what I did for
my version. They seem to
> > > like it. Steve is more than welcome to
incorporate what I did in his
> > > code as well.
> > > >
> > > > On the topic of ultimatic: my impression
is that not many folks
> > use
> > > it. This thread is the first time I have
heard of someone using it.
> > My
> > > thinking is similiar to Jim Miller's.
Why add it in the firmware,
> > when
> > > you can do it mechanically with a single
lever paddle or a dual
> > paddle
> > > used as a single lever paddle with an
iambic keyer? That said, if
> > you
> > > are interested in ultimatic keying please
let me know, either on

> > list
> > > or via private email and if there is enough
interest, I will see
> > about
> > > adding it to my version of the firmware.
> > > >
> > > > Couple of things I try to keep in mind
when deciding what to add
> > to
> > > my firmware:
> > > >
> > > > #1: Is it something that I want? (Not an
absolute, but afterall,
> > > this is how my interest in the firmware
started.)
> > > >
> > > > #2: Does it add too much? (This is a
minimalist rig. Too many
> > > features will make it too complicated and
then not attractive to its
> > > target audience.)
> > > >
> > > > Back when the MPU was limited to 4K bytes
adding ultimatic would
> > not
> > > even be considered. But now with 8K bytes,
it is in the possible
> > catagory.
> > > >
> > > > Caveat: I speak only for myself and
reserve the right to put my
> > > wife, kids, and job first. In other words,
any changes might take a
> > > while. :)
> > > >
> > > > -mike/w1mt
> > > >
> > > > --- On Wed, 10/15/08, Ken Lotts <ken@>
wrote:
> > > >
> > > >
> > > >
> > > > Mode A was never my strong mode but I
never had an
> > > absolute intolerance for it until I built
the ATS3.. I think my CQ
> > > turns into NQ or something like that.
> > > > For a while, I had huge problems even
with mode B on the ATS3.
> > The

> > > W1MT firmware seems to have made a big difference in the mode B so I
> > > really have no issues with it any more (thanks Mike!).
> > > >
> > > > >
> > > >
> > >
>

3682. Re: Pre-Drilled Enclosure

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-21 04:53:01 UTC
From: qwasty
Topic: 3678 Message: 3682

I used to be a machinist. I used to make missiles and other flight hardware, but now I look at that stuff and drool, even though it's only a box. That's actually not a bad price. If it were a government job that box would cost $ 2400 instead of $24. I'd probably buy one just to save the tooling and setup costs, but I'd want to stick a silicone gasket on it to make it waterproof. Since it's aluminum, you can use a hammer and a push pin to make a starter hole for a drill. If your drill is small enough, like 1/8th inch, you could drill it out by hand with a little common drill pretty easily. You could use a dremel sanding tip to make it big enough for your connectors. No fancy tools necessary! It'd look great if the manufacturer would get them anodized in various colors, and it would keep it from scratching. 6061 aluminum is soft, and dust on a desktop will have no trouble scraping it up.

--- In AT_Sprint@yahoogroups.com, "k5jfp" <w5zl@ ...> wrote:
>
> I thought I had seen something about a CNC machined aluminum
> alternative to the trusty Altoids tin, and after a bit of a search
> found it. You can eat a lot of Altoids for the price (twenty-four
> bucks), but it looks like it might be pretty substantial:
>
> http://www.americanmorse.com/aa1.htm
>
> Legal Disclaimers: I've never seen one of these. I don't have a
> pecuniary interest of any kind. Your mileage may vary. Make a legal
> U-turn.
>
> Gary W5ZL
>
> --- In AT_Sprint@yahoogroups.com, david gauding <dgauding@> wrote:

> >
> > Nick,
> >
> > I can't help on a pre-drilled enclosure but
I've spent the last two
> weeks drilling lots of holes in Altoids tins
to hold several antenna
> tuner prototypes. I've been pleased with the
results of the drilling.
> Unfortunately, the tuner itself has a ways to
go! <g>
> >
> > I start by marking the hole location with a
carbide tipped punch to
> keep the drill from wandering. I back the area
to be punched with a
> piece of wood to keep bending to a minimum. I
use the smallest drill
> and increase the diameter in steps until it
matches the 1/8" tip on a
> 1/2" diameter Uni-Bit. Then I use a Unit-Bit
to finish the hole.
> >
> > It took me several attempts to realize that
unless the Uni-Bit is
> running at top speed it grabs the thin metal
of the tin with
> predictable results. Done right the holes
perfectly round and the
> Uni-Bit does not wander.
> >
> > I also have what machinists call an edge
breaker. This rotary hand
> tool cleans-up the outside edge of the hole.
For clearance reasons it
> won't clean-up holes drilled in the sides of
the tin from the inside.
> For the inside sides I use a larger drill bit
or a handloader's
> deburring tool.
> >
> > Hope this is helpful until you find a pre-
drilled enclosure.
> >
> >
> > Dave, NF0R
> >
> >
> >
> >

> > ----- Original Message ----
> > From: nwgarner <nwgarner@>
> > To: AT_Sprint@yahoogroups.com
> > Sent: Monday, October 20, 2008 7:25:00 PM
> > Subject: [AT_Sprint] Pre-Drilled Enclosure
> >
> > Hello Everyone,
> > I've eaten way too many Altoids and have
been through four iterations
> > of drilling to get the holes right but it
doesn't come out as I'd like
> > it. I've since made an enclosure out of the
rosewood you can get at
> > Michael's but it's not very rigid. Is
anyone selling an ATS-3B
> > compatible enclosure, pre-drilled with a
professional look? I'd like
> > to be able to put a BNC connector in it as
well.
> >
> > Nick
> >
> >
> > ------------------------------------
> >
> > Yahoo! Groups Links
> >
> >
> >
> > http://docs.yahoo.com/info/terms/
> >
>

3683. Re: Ultimatic, Iambic Keying, et al.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-21 05:04:11 UTC
From: radio_kx0r
Topic: 3627 Message: 3683

--- In AT_Sprint@yahoogroups.com, Dale Putnam <daleputnam@...> wrote:

Dale,

Congratulations on getting a new keyer. They certainly aren't all the same.

Just wanted to say that I also am a left-handed writer but a right-handed CW sender. I use most hand tools in the right hand first, so maybe I'm really a little more right handed - but I learned to draw early, so it went to the left hand. When I was about 11 I started to learn CW, and I had a fight with myself about which hand to use with the straight key. I decided on the right hand for the key so I could write with the left hand and not have to switch hands, etc.

I can't type worth a hoot and use four fingers.

They call us "mixed ambilaterals", I think. It's nice to have two hands and two brains connected together.

To the folks building their ATS-3B kits, I suggest searching this site for all the material we posted last year about this time. There's plenty of good material on SMT technique, the Cash Olson hot air soldering method, other methods and tools, etc. Use the SEARCH tool to find this material. Also please look at the pictures and files we have posted here...lots of ideas and answers.

Carey
KX0R

>
> I think.. just maybe... with all the input about the different keying... I just may have found out
> why... after so many years... why exactly the little homebrew - 7 IC - battery powered - relay output keyer in a bud box with sidetone and built in paddles... all for the new key enthusiast...
> me ... didn't work right... try as hard as I could... and did... ruined ... oh I don't really know.. but at least a hundred or even more.. sets of ears, trying to make a little sense of what I was sending, just couldn't do it. Then, after a whole bunch of months... and finally.. finally... I found at a hamfest somewhere... a cute litte keyer.... brandy new, well sorta... then... was a new style keyer.. and the fellow didn't want it... but I suspect... just maybe... he may have been one to have heard me.. on the air... limping along. Well anyway.. here he is, with this " new fangled thing.. can't make it work, would you give it a try?" situation.. I couldn't pass it up... price was right... and low ... it

happened. ... Squeeze paddles.... so... suddenly... there came sweet,
smooth, and pretty nice sounding, cw... from my own finners.. WOW!
> Yep, sucked me in... since... I have tried most all.. keyers,
keys... and even a TO keyer...
> but you know.. the squeeze key works the best.... for me.
> You don't suppose it has something to do with me being left
handed... key with the right while typing or writing with the left?
hmmmm.... and another question is born. --... ...--Dale - WC7S in Wy
> _____
> Stay organized with simple drag and drop from Windows Live Hotmail.
> http://windowslive.com/Explore/hotmail?
ocid=TXT_TAGLM_WL_hotmail_102008
>

3684. Re: Pre-Drilled Enclosure

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-21 16:58:51 UTC
From: nwgarner
Topic: 3678 Message: 3684

Thank you to everyone for the hints and tips. I'm going to give it a couple more tries.

73,
Nick
N3WG

3685. Re: [AT_Sprint] Re: Pre-Drilled Enclosure

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-21 19:54:15 UTC
From: john
Topic: 3678 Message: 3685

I'd recommend opening a small hole with a drill (use wood backing) then with a grinding stone in a dremel, it takes only seconds to fit to size with no danger of tearing the metal.

Best
John K5MO

At 12:58 PM 10/21/2008, nwgarner wrote:
>Thank you to everyone for the hints and tips. I'm going to give it a
>couple more tries.
>
>73,
>Nick
>N3WG
>
>
>
>
>------------------------------------
>
>Yahoo! Groups Links
>
>
>

3686. Re: Pre-Drilled Enclosure

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-22 03:42:48 UTC
From: camqrp
Topic: 3678 Message: 3686

I put my ATS-3A in an American Morse box. See pictures in the photo section under "N6GA's scope photos." I used a Unibit, it worked like a charm. A tad sturdier than the Altoids,

Cam N6GA

--- In AT_Sprint@yahoogroups.com, "k5jfp" <w5zl@...> wrote:
>
> I thought I had seen something about a CNC machined aluminum
> alternative to the trusty Altoids tin, and after a bit of a search
> found it. You can eat a lot of Altoids for the price (twenty-four
> bucks), but it looks like it might be pretty substantial:
>
> http://www.americanmorse.com/aa1.htm
>
> Legal Disclaimers: I've never seen one of these. I don't have a
> pecuniary interest of any kind. Your mileage may vary. Make a legal
> U-turn.
>
> Gary W5ZL
>
>

3687. Re: Ultimatic, Iambic Keying, et al.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-22 22:49:10 UTC
From: David Packard
Topic: 3627 Message: 3687

Is there an advantage in using Iambic keying? Within a year, or so, a post on QRP-L referenced an ergonomic study comparing the two methods of keying. As I recall, the conclusion was that Iambic keying was more efficient on some letters of the alphabet, but it was sufficiently less efficient on the remaining letters to lose its advantage. Apparently, the letters on which Iambic keying is more efficient are less commonly used.

I learned to send on a tube HB keyer that my brother (Craig WA1BXP [SK]) and I built in the early sixties from the Handbook, I think. We made a paddle from some curtain rod brackets and a hacksaw blade broken into halves. I think that old key is the reason I today have no problem sending Ultimatic with an Iambic paddle, all though I prefer the former.

72, Dave K1YHR.

3688. Re: Ultimatic, Iambic Keying, et al.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-23 06:29:15 UTC
From: qwasty
Topic: 3627 Message: 3688

If you could find the details on that QRP-L post, I would really appreciate it. I'll do some searching myself too.

--- In AT_Sprint@yahoogroups.com, David Packard <dpackard@...> wrote:
>
> Is there an advantage in using Iambic keying? Within a year, or so, a
> post on QRP-L referenced an ergonomic study comparing the two methods
> of keying. As I recall, the conclusion was that Iambic keying was more
> efficient on some letters of the alphabet, but it was sufficiently less
> efficient on the remaining letters to lose its advantage. Apparently,
> the letters on which Iambic keying is more efficient are less commonly used.
>
> I learned to send on a tube HB keyer that my brother (Craig WA1BXP [SK])
> and I built in the early sixties from the Handbook, I think. We made a
> paddle from some curtain rod brackets and a hacksaw blade broken into
> halves. I think that old key is the reason I today have no problem
> sending Ultimatic with an Iambic paddle, all though I prefer the former.
>
> 72, Dave K1YHR.
>

3689. KK5PY MICRO-KEY super tiny backepacker key

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-23 07:58:45 UTC
From: qwasty
Topic: 3689 Message: 3689

Here's an interesting tiny little key. It's about the size of a quarter. It is probably a better match for the ATS-3B than the Palm Radio Mini Paddle. It's a fraction of the price too, at only $20. I could save for a fine Begali key for fixed use if I got one of those instead of the Palm paddles, for portable use.

http://www.arrl.org/news/features/2001/03/01/1/?nc=1
http://www.eham.net/reviews/detail/1761

3690. Re: [AT_Sprint] KK5PY MICRO-KEY super tiny backepacker key

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-23 12:21:19 UTC
From: John A. Evans - N0HJ
Topic: 3689 Message: 3690

Indeed, this little key is perfect for the ATS-xx rigs. Unfortunately, they are no longer being made, so unless you build one yourself from finger and brass stock, you won't be able to obtain one. They are rare out there.

72 - john - n0hj

qwasty wrote:
>
> Here's an interesting tiny little key.
>

3691. Re: [AT_Sprint] KK5PY MICRO-KEY super tiny backepacker key

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-23 17:03:06 UTC
From: Stephen Wandling
Topic: 3689 Message: 3691

I may have the distinction of getting the last Micro key from Dennis Foster. Any of you that follow the adventures of N0TU & Rooster/Peanut may have seen the Micro that Steve sometimes uses. Steve calls his a TE-NE-KE, which is another manufacturer of the same design and more info can be found here: http://www.qsl.net/noarc/newneke.htm

I contacted Dennis last Spring and he dug around and found one and sent it to me. I understand that he suffered a fire that wiped out his materials, tools and jigs. Basically it put him out of business. Too bad, as this is a very small, light and remarkable paddle. I did have to repair the cord attachment a couple of times, as he used very flexible light wire. I have recently put on a new cord that's pretty stiff by comparison, but its a shielded pair that looks like zip cord, from an old computer speaker, and I think it will stand up well.

72
Stephen
VE7NSD

qwasty wrote:
> Here's an interesting tiny little key. It's about the size of a
> quarter. It is probably a better match for the ATS-3B than the Palm
> Radio Mini Paddle. It's a fraction of the price too, at only $20. I
> could save for a fine Begali key for fixed use if I got one of those
> instead of the Palm paddles, for portable use.
>
> http://www.arrl.org/news/features/2001/03/01/1/?nc=1
> http://www.eham.net/reviews/detail/1761
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>
>
>

3692. micro portable tuners and / or antennas

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-23 23:05:58 UTC
From: qwasty
Topic: 3692 Message: 3692

OK, if you want to go portable and light, with quick and easy setup and take down, is it best done with a simple little wire antenna and a "big" tuner, or with a big resonant antenna with feedline and no tuner?

3693. Re: [AT_Sprint] micro portable tuners and / or antennas

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-23 23:11:22 UTC
From: w9ya
Topic: 3692 Message: 3693

On Thu, Oct 23, 2008 at 5:05 PM, qwasty <qwasty@...> wrote:
> OK, if you want to go portable and light, with quick and easy setup
> and take down, is it best done with a simple little wire antenna and
> a "big" tuner, or with a big resonant antenna with feedline and no
> tuner?

Actually I use the best of both worlds. Simple, portable and
lightweight YET FULL SIZED antenna with quick and easy setup and
takedown. It is resonant and requires a *simple and lightweight*,
(resonant) feedline that is EXCEPTIONALLY efficient. No tuner is
required either. Nor is a balun needed (ever).

It all fits in my pocket too.

Vy 72;

Bob
w9ya

3694. Re: [AT_Sprint] micro portable tuners and / or antennas

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-23 23:39:37 UTC
From: Stephen Wandling
Topic: 3692 Message: 3694

I don't know if you consider this a "big" tuner, but it makes a tidy
little package. This tuner also has the Tayloe bridge which the ATS
rigs like to look at.

http://www.aa5tb.com/coupler.html

72
Stephen
VE7NSD

qwasty wrote:
> OK, if you want to go portable and light, with quick and easy setup
> and take down, is it best done with a simple little wire antenna and
> a "big" tuner, or with a big resonant antenna with feedline and no
> tuner?
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>
>
>

3695. Re: [AT_Sprint] micro portable tuners and / or antennas

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-24 00:18:40 UTC
From: WA0ITP
Topic: 3692 Message: 3695

For me its a 50 foot end fed zepp and a small tuner. Its not too much wire, only one end neds to be erected, and a small tuner, BLT, T-Match, LDG, T1, etc. each work fb and are easy to carry along.

If by portable you mean backpacking, then a plain wire and a vy small tuner is hard to beat, ie. 50 -55 foot wire and an ALT.

Many folks like the ease of a lightweight resonant dipole for ease of use also. But you have 2 ends to hoist and need one for each band. Everything's a tradeoff, eh?

I love this radio stuff !
72, 73 Terry, WA?ITP
www.wa0dx.org/wa0itp
www.4sqrp.com
www.hams4u.com
www.qrpspots.com

----- Original Message -----
From: "qwasty" <qwasty@...>
To: <AT_Sprint@yahoogroups.com>
Sent: Thursday, October 23, 2008 6:05 PM
Subject: [AT_Sprint] micro portable tuners and / or antennas

> OK, if you want to go portable and light, with quick and easy setup
> and take down, is it best done with a simple little wire antenna and
> a "big" tuner, or with a big resonant antenna with feedline and no
> tuner?
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>

No virus found in this incoming message.
Checked by AVG - http://www.avg.com
Version: 8.0.175 / Virus Database: 270.8.2/1741 - Release Date: 10/23/2008 7:54 AM

3696. don't forget this popular 1 oz. paddle

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-24 00:59:38 UTC
From: Alan Shapiro
Topic: 3696 Message: 3696

I've had one of these White Rook Products paddles for years and it is tiny, sturdy, lightweight, and inexpensive.

http://electronicsusa.com/mk.html

3697. [Fwd: Re: TE NE KE]

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-24 04:21:17 UTC
From: Stephen Wandling
Topic: 3697 Message: 3697

Here is the response I got from querying the president of the NOARC
regarding their TE NE KE. Note that he says the Micro and the TE NE KE
are the same design, the most notable difference being that the TE NE KE
has a base attached, but which could probably be easily removed. I have
mounted my Micro in a slotted wine cork like I noted that N0TU had
done. This give a bit more to grip and works well. You can see this on
Steve's site: http://www.angelfire.com/planet/goatman/ATS3a.html

http://www.qsl.net/noarc/newneke.htm

72
Stephen
VE7NSD

-------- Original Message --------
Subject: Re: TE NE KE
Date: Thu, 23 Oct 2008 23:05:59 -0400
From: <jtlr.fischer@...>
To: Stephen Wandling <swandling@...>
References: <49010004.6040400@...>

Stephen yes they are still available I believe the Micro and the te ne ke
are the same I think dennis foster and Boyd mason ne8ke shared the design.
thank you for your interest in the te-ne-ke. John kc8uny
----- Original Message -----
From: "Stephen Wandling" <swandling@...>
To: <jtlr.fischer@...>
Sent: Thursday, October 23, 2008 6:51 PM
Subject: TE NE KE

> John,
>
> Just a quick note to ask if the NOARC still sells the TE NE KE. There is
> some recent discussion regarding Dennis Foster's "Micro" key of similar
> design, on the QRP-L list, but Dennis suffered a fire some years ago and
> no longer manufactures his key. The Micro is basically the same design at
> the TE NE KE, so figured others might want to consider the TE NE KE.
>
> I think I have the last Micro that Dennis Foster sold. I also might be
> interested in a TE NE KE if they are still available.
>
> Thanks
>
> 72
> Stephen
> VE7NSD

>

3698. Re: [AT_Sprint] [Fwd: Re: TE NE KE]

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-24 12:59:18 UTC
From: John A. Evans - N0HJ
Topic: 3697 Message: 3698

To me, the most notable difference is size. The TE NE KE is much larger
than the micro.

72 - john - n0hj

Stephen Wandling wrote:
>
> Here is the response I got from querying the president of the NOARC
> regarding their TE NE KE. Note that he says the Micro and the TE NE KE
> are the same design, the most notable difference being that the TE NE KE
> has a base attached, but which could probably be easily removed.
>

3699. Re: [AT_Sprint] [Fwd: Re: TE NE KE]

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-24 16:34:28 UTC
From: Stephen Wandling
Topic: 3697 Message: 3699

John, you're right. I've never seen one in the flesh and thought the one photographed on the CQ magazine looked about the same as my MICRO, but on their PDF ad, they show one with a tape measure in the picture and its about twice the size of my MICRO. My MICRO is about 1 3/8" long.

Maybe the most notable difference is the price? Dennis charged $20 for the MICRO.

72
Stephen
VE7NSD

John A. Evans - N0HJ wrote:
> To me, the most notable difference is size. The TE NE KE is much
> larger than the micro.
>
> 72 - john - n0hj
>
> Stephen Wandling wrote:
>>
>> Here is the response I got from querying the president of the NOARC
>> regarding their TE NE KE. Note that he says the Micro and the TE NE KE
>> are the same design, the most notable difference being that the TE NE KE
>> has a base attached, but which could probably be easily removed.
>>
>
>

3700. Re: [AT_Sprint] [Fwd: Re: TE NE KE]

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-24 19:27:48 UTC
From: david gauding
Topic: 3697 Message: 3700

TGIF!

I had forgotten about my Micro paddle until this thread got underway. Some drawer searching ensured. I just plugged it in my K2 and still works as well as I remember.

Dennis did a super job with his various designs. My sense is rolling your own would not be too difficult. The critical component seems to be finger stock which serves as both contacts and fingerpieces. They need to be bent precisely.

I used the Micro portable for several years as a two-handed paddle. I like the idea posted earlier about using a split cork as a holder to make it easier to manipulate - especially in colder weather. I must try that.

I currently use a St. Louis Paddle (QRPp Winter 2000) for portable including with an ATS3B. It is a single lever design based on a 1/4" plug and can be used on a cable assembly or plugged directly into a socket in the panel of my homebrew 20CW station. Nothing remarkable but it is an easily homebrewed, lightweight and low-cost option.

This little paddle's exposed lever is somewhat fragile and spacing changes with big temperature swings - i.e. FYBO. Adjustment entails bending contact arms which is an in-exact science and always easier at home than trailside.

I am planning on adding a CW Touch Keyer to the ATS3B. I have already prototyped a SLP for fixed fingerpiece keying. This will eliminate adjustments and for all practical purposes the paddle should be bulletproof.

Dave, NF0R

----- Original Message ----
From: Stephen Wandling <swandling@...>
To: AT_Sprint@yahoogroups.com
Sent: Friday, October 24, 2008 11:34:28 AM
Subject: Re: [AT_Sprint] [Fwd: Re: TE NE KE]

John, you're right. I've never seen one in the flesh and thought the
one photographed on the CQ magazine looked about the same as my MICRO,
but on their PDF ad, they show one with a tape measure in the picture
and its about twice the size of my MICRO. My MICRO is about 1 3/8" long.

Maybe the most notable difference is the price? Dennis charged $20 for
the MICRO.

72
Stephen
VE7NSD

3701. Re: micro portable tuners and / or antennas

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-25 00:38:25 UTC
From: radio_kx0r
Topic: 3692 Message: 3701

--- In AT_Sprint@yahoogroups.com, "qwasty" <qwasty@...> wrote:
>

There are no easy answers here - but you can try all kinds of combinations if you get outdoors with your radio.

I like the dipole, ladder line, and BLT for ease of use, efficiency, and multiband operation. I have backpacked with this - I used an 85 foot wire. Not the lightest combo, but it's good. Use more wire if you're planning on 80M at night - likely this fall and winter - or settle for a shorter dipole if you're on only during the day.

On a recent backpack trip I used an inverted L and my homemade ALT. I operated on 40, 30, and 20. Try 55 feet, or maybe about 80 feet. for the antenna, and use a short counterpoise - like 16 feet or less. For low power you don't want a high-current standing wave near ground - you want it as high as possible - so forget the common advoce to use a quarter wave counterpoise. If you don't believe me, model it with EZNEC and see what I saw - the signal get stronger as the counterpoise gets shorter, within reasonable limits. No feedline is required for the INV L and counterpoise. The wire can be diagonal - one support - and will work fine.

Experiment, try stuff, take some extra wires with clips so you can change lengths to get a better match. ALWAYS run the ATS rigs with a match indicator (Dan Tayloe LED bridge like on the BLT), always run with a really good match, and always use a tuner of some kind unless you want to work on your rig. If you run 12V and 5W out the tuner is required. The results are really fun, like you really can call CQ and get contacts, you can have long ragchews with QRO guys, etc. It's a kick.

I'll be operating my ATS-3B this weekend, Saturday night, probably at 7.03-7.04, from a campsite in the mountains at 9000 feet. I'm thinking dipole or inverted V.

The inverted V only needs one support. If long, light strings are used on the ends, the droop is minimal, even if they tie near ground level. There is no real need to erect the antenna in a line - the models show OK performance even at at right angle.

Two 75 foot wires in a horizontal Vee, with an angle of 45-55 degrees, make a nice 40M and 30M antenna. Radiation is at a right angle to the line bisecting the Vee. This is a variation of the W8JK. You can scale this for higher bands.

Be flexible. The trees or other supports will tell you what to put up. I recommend doing some modelling so you can know what to expect when you put up wires and have to go with whatever is available.

Higher is usually better, unless you want to work NVIS (high angle skip). 30 feet gets lots of Q's. On mountains and hillsides less will work amazingly well. More is awesome.

If you want some gain, try an extended double zepp fed with ladder line and a BLT. It has narrow lobes but works well. AN EDZ for 20M will work as a dipole for 30M and 40M, providing you have a decent balanced tuner.

My favorite QRP antenna is the horizontal loop, cut for a full wave on 40M - about 145 feet around the loop. Feed it with ladder line or 300 ohm twinlead. Works well on 40 and 20, even other bands. It requires at least 3 supports, so it's no picnic, but there's no need to make it equilateral or even symmetric. Modelling shows this antenna to be very tolerant of putting it where it will go up. This one will delight you every time. It has the advantage that it works well with trees - it doesn't need to run through the branches the way a center-supported dipole usually does.

Vertical loops work well too, and some of them work well with a single high tree.

Fun activities!

Putting up antennas gets easier the more of them you do. Start simple and then let your fantasies take you places.

72/73

Carey/George
KX0R

> OK, if you want to go portable and light, with quick and easy setup
> and take down, is it best done with a simple little wire antenna and
> a "big" tuner, or with a big resonant antenna with feedline and no
> tuner?
>

3702. Re: Ultimatic vs. Iambic Keying

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-25 01:40:28 UTC
From: qwasty
Topic: 3627 Message: 3702

I'm still somewhat new to this. I can see how a single lever set between two different switch contacts (SPDT?) could function like ultimatic mode. But, I've never even seen a single lever iambic key before, so what's the practical difference compared to double lever pair of paddles? It seems to me that the wide width of spacing is the only advantage the pair paddles have over a single lever, and the single lever could easily be wide enough by design. So, all the other advantages go to the single lever design: Ultimatic mode plus it's simpler, more reliable, easier to homebrew, and easier to adjust. Am I missing anything? Pair paddle iambic doesn't seem to offer much, if anything, over a single lever ultimatic design, other than the fact that I've never seen a commercially produced version of the ultimatic single lever key.

--- In AT_Sprint@yahoogroups.com, "Jim Miller" <jim@...> wrote:
>
> iirc, if you just use a single lever paddle and plug it into the k3 when
> setup for iambic you are getting the same thing as ultimatic.
>
> 73
>
> jim ab3cv
>

3703. Re: [AT_Sprint] Re: Ultimatic vs. Iambic Keying

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-25 02:27:46 UTC
From: Steven Carr
Topic: 3627 Message: 3703

qwasty...don't confuse the keyer with the paddle.

iambic keyer - when both switches are pressed outputs alternating dits and dahs.

ultimatic keyer - when both switches are pressed outputs a stream of either dits or dahs depending on which was the last one pressed.

with the single lever paddle both iambic and ultimatic keyer will act the same since the switches cannot be active simultaneously.

the dual lever paddle is necessary to allow simultaneous switch closures when using iambic or ultimatic modes. an iambic key must allow both switches to be closed, therefore there is no such thing as a single lever iambic key.

personally I'd stick with the iambic simply because it is more common...otherwise you risk being a lid when using someone else's setup. ;-)

one thing I would like to see is a "bug" mode. I have yet to see a decent backpacking bug, so I had to learn both iambic and bug, which means I'm not really good at either (that's my story and I'm sticking to it!).

Steve
ae4yq

qwasty wrote:
>
> I'm still somewhat new to this. I can see how a single lever set
> between two different switch contacts (SPDT?) could function like
> ultimatic mode. But, I've never even seen a single lever iambic key
> before, so what's the practical difference compared to double lever
> pair of paddles? It seems to me that the wide width of spacing is the
> only advantage the pair paddles have over a single lever, and the
> single lever could easily be wide enough by design. So, all the other
> advantages go to the single lever design: Ultimatic mode plus it's
> simpler, more reliable, easier to homebrew, and easier to adjust. Am
> I missing anything? Pair paddle iambic doesn't seem to offer much, if
> anything, over a single lever ultimatic design, other than the fact
> that I've never seen a commercially produced version of the ultimatic
> single lever key.
>
> --- In AT_Sprint@yahoogroups.com <mailto:AT_Sprint%40yahoogroups.com>,
> "Jim Miller" <jim@...> wrote:
> >

> > iirc, if you just use a single lever paddle and plug it into the k3
> when
> > setup for iambic you are getting the same thing as ultimatic.
> >
> > 73
> >
> > jim ab3cv
> >
>
>

3704. FS - AA and AAA batteries

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-26 00:44:51 UTC
From: Dale Putnam
Topic: 3704 Message: 3704

I have a handful of batteries that need to find new homes, before wasting away here.
Professional grade alki batteries,
both sizes - could be yours, AA - 8 for 10 or AAA - 16 for 10, or package the two together and get 24 batteries, just in time
for the Christmas rush, and I'll pick up the shipping.
I also have 2600 mah NiMH rechargable AA they should sell for well over $2, if you want to build up a 12v pack, you'll need 10,
and you can have enough for the job, for only $20, and I'll pick up the postage.
Email me off list please, I will take paypal to make it real easy.
--... ...--Dale - WC7S in Wy

_____
When your life is on the go—take your life with you.
http://clk.atdmt.com/MRT/go/115298558/direct/01/

3705. How to get an ATS-3B?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-26 23:12:56 UTC
From: qwasty
Topic: 3705 Message: 3705

I've been reading here for a while, and thinking about things, and I've decided to get back into the ham radio hobby after many years off the air because of this radio. How do I get one?

I prefer one that's already built and adjusted because I don't have any equipment of any kind whatsoever, so I'm totally starting from scratch, and I can't afford to do much other than get the radio and some batteries, and maybe make a crappy wire antenna to receive with. I'll have to wait on everything else for now.

If I can't get one that's already built, I suppose I can get some help from friends who may let me use their stuff to get it working.

Is there a new version coming out? Usually long delays in new production means there's something going on behind the scenes. I'd like to get the most recent version if I can. I passed on some cheap MFJ cubs because I want to do digital modes, and this radio is the most capable of inexpensive radios.

What do you all think?

3706. Using Flux With Solder Paste

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-27 00:06:49 UTC
From: Jim Fraser
Topic: 3706 Message: 3706

I am soon to start on my second 3B this time using the solder paste/hot air method. In doing some practice with the Cash Olsen paste I just received, I find that the paste does not tend to stick to the pads and parts too well. As a result the embossing tool blew a few parts of my test board. Would it help to put some flux on the pads before applying the paste? I think I saw this done on some hot air soldering videos on YouTube.

Jim K6JF

3707. How do I get an ATS-3B?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-26 19:07:39 UTC
From: qwasty
Topic: 3707 Message: 3707

I've been reading here for a while, and thinking about things, and I've decided to get back into the ham radio hobby after many years off the air because of this radio. How do I get one?

I prefer one that's already built and adjusted because I don't have any equipment of any kind whatsoever, so I'm totally starting from scratch, and I can't afford to do much other than get the radio and some batteries, and maybe make a crappy wire antenna to receive with. I'll have to wait on everything else for now.

If I can't get one that's already built, I suppose I can get some help from friends who may let me use their stuff to get it working.

Is there a new version coming out? Usually long delays in new production means there's something going on behind the scenes. I'd like to get the most recent version if I can. I passed on some cheap MFJ cubs because I want to do digital modes, and this radio is the most capable of inexpensive radios.

What do you all think?

3708. Re: How to get an ATS-3B?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-26 23:52:07 UTC
From: Jim Fraser
Topic: 3705 Message: 3708

The creator of the rig, Steve Weber KD1JV, mentions on his web site that he may have another run of the ATS-3B kits around Christmas. Keep an eye on his web site.

http://kd1jv.qrpradio.com/

Better yet, keep an eye out here on the group as kit offerings are usually announced here first!

Perhaps you could email him and let him know you are interested in getting a kit, this may help him decide to go ahead with another run. I picked up my second ATS-3B in the last run and will be starting to assemble it soon. Going to try the hot air soldering method this time.

Jim K6JF

3709. Re: [AT_Sprint] Using Flux With Solder Paste

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-27 01:31:11 UTC
From: Stephen Wandling
Topic: 3706 Message: 3709

Jim,

If you got your 3B from the last batch, did you get your solder paste
then as well? It seems to me that yours might have dried out? I had
no trouble at all with parts staying in place and have heard of people
dropping a board with parts stuck on with the paste and all was well.
I'm not aware of using flux with solder paste, but then there are a lot
of things that I'm not aware of.

72,
Stephen
VE7NSD

Jim Fraser wrote:
> I am soon to start on my second 3B this time using the solder paste/hot
> air method. In doing some practice with the Cash Olsen paste I just
> received, I find that the paste does not tend to stick to the pads and
> parts too well. As a result the embossing tool blew a few parts of my
> test board. Would it help to put some flux on the pads before
> applying the paste? I think I saw this done on some hot air soldering
> videos on YouTube.
>
> Jim K6JF
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>
>
>

3710. Re: [AT_Sprint] Re: How to get an ATS-3B?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-27 02:38:17 UTC
From: steve d
Topic: 3705 Message: 3710

How many runs have been made of the latest version? Or have the different runs been different versions?

I am interested in one as well. I just started backpacking and my latest trip had 15lbs of radio gear along. It would be nice to knock that down a bit HIHIHI.

Steve, KC8QVO

--- On Sun, 10/26/08, Jim Fraser <jimf53@...> wrote:

From: Jim Fraser <jimf53@yahoo.com>
Subject: [AT_Sprint] Re: How to get an ATS-3B?
To: AT_Sprint@yahoogroups.com
Date: Sunday, October 26, 2008, 7:52 PM

The creator of the rig, Steve Weber KD1JV, mentions on his web site that he may have another run of the ATS-3B kits around Christmas. Keep an eye on his web site.

http://kd1jv. qrpradio. com/

Better yet, keep an eye out here on the group as kit offerings are usually announced here first!

Perhaps you could email him and let him know you are interested in getting a kit, this may help him decide to go ahead with another run. I picked up my second ATS-3B in the last run and will be starting to assemble it soon. Going to try the hot air soldering method this time.

Jim K6JF

3711. Re: [AT_Sprint] Re: How to get an ATS-3B?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-27 03:25:51 UTC
From: J. Haynes
Topic: 3705 Message: 3711

This calls for an FAQ!

3712. Re: Using Flux With Solder Paste

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-27 03:42:59 UTC
From: Jim Fraser
Topic: 3706 Message: 3712

Hi Stephen,

The kit envelope says it was postmarked Aug 11, this was from the last batch. I did not order the solder paste until a couple weeks ago and received it last week.

Jim K6JF

--- In AT_Sprint@yahoogroups.com, Stephen Wandling <swandling@...> wrote:
>
> Jim,
>
> If you got your 3B from the last batch, did you get your solder paste
> then as well? It seems to me that yours might have dried out? I had
> no trouble at all with parts staying in place and have heard of people
> dropping a board with parts stuck on with the paste and all was well.
> I'm not aware of using flux with solder paste, but then there are a lot
> of things that I'm not aware of.
>
> 72,
> Stephen
> VE7NSD
>
> Jim Fraser wrote:
> > I am soon to start on my second 3B this time using the solder paste/hot
> > air method. In doing some practice with the Cash Olsen paste I just
> > received, I find that the paste does not tend to stick to the pads and
> > parts too well. As a result the embossing tool blew a few parts of my
> > test board. Would it help to put some flux on the pads before
> > applying the paste? I think I saw this done on some hot air soldering
> > videos on YouTube.
> >
> > Jim K6JF
> >
> >

> > ------------------------------------
> >
> > Yahoo! Groups Links
> >
> >
> >
> >
> >
>

3713. Solder Paste

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-27 03:46:15 UTC
From: J. Haynes
Topic: 3713 Message: 3713

My year-old paste has worked pretty well. It's less creamy, but the solder turns out the same.
Jonathan kc7fys

3714. Re: How to get an ATS-3B?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-27 04:02:15 UTC
From: radio_kx0r
Topic: 3705 Message: 3714

--- In AT_Sprint@yahoogroups.com, steve d <kc8qvo@...> wrote:

Steve,

There were at least two runs of the ATS-3B. There were at least two runs of the ATS-3A also. I don't know the earlier history, but there were several models over several years, and possibly multiple runs of some.

There were changes in code between runs as well, and many operators may be running code with a few bugs.

Updated code from Steve Weber is available here, and Mike W1MT offers his alternate code as well (I still want to try it).

Does anyone have a history document posted here on this site?

With an ATS rig you can get that backpack load down to a few pounds - or even less, if you make choices and are creative.

I'm already at the point where the weight of the rig, band modules, paddles, headphones, battery, tuner, and cables is roughly the same as the antenna, balanced feedline, support lines, and fishing rod used to put up antenna.

If you settle for just one or two bands, make a really small tuner, use small wire, and eliminate the feedline, you can cut the weight and bulk considerably - but you lose a lot of flexibility and maybe several db of precious signal.

There's room for lots of work and development here. We're nowhere close to having ideal portable multiband systems. The tradeoffs are cruel, and there aren't many sunspots to help. The ATS rigs are so small and efficient that they've turned the portable game upside down - now all the weight problems are in the rest of the system - the radio is almost nothing!

There also are tradeoffs in the TIME required to erect efficient antennas vs. simpler and less effective antennas. Many times I've taken an hour or two to erect a dipole with three supports in the trees, including pondering the problems...and another voice in my head says "Just put up one line and make it a vertical or a sloper, and save yourself some time and get on the air quickly! Many times I've used a nice balanced dipole, only to make a contact with a station located well outside the directional signal pattern, and the thought has occured that a vertical might actually work better than a

dipole 10 db outside the pattern max!

Of course you can put up a couple of dipoles at right angles, and
that's a super system, but you have to carry twice the wire and
feedline, plus burn some more precious time getting it all up where
you want it....a perfectionist's nightmare.

Beware that QRP portable is often frustrating, it's full of surprises
and problems, and things rarely work out just the way you plan.
Either there are not enough trees, or there are way too many.
Sometimes the weight and line go right over the tree at just the
right spot, and then it gets stuck in the branches and won't drop.

It's really fun if you don't mind the hassles - it's really a game
where you make some of the rules and then adjust to everything else.

You can do a lot with 3 or 4 pounds!

72/73

Carey
KX0R

> How many runs have been made of the latest version? Or have the
different runs been different versions?
>
> I am interested in one as well. I just started backpacking and my
latest trip had 15lbs of radio gear along. It would be nice to knock
that down a bit HIHIHI.
>
> Steve, KC8QVO
>
> --- On Sun, 10/26/08, Jim Fraser <jimf53@...> wrote:
>
> From: Jim Fraser <jimf53@...>
> Subject: [AT_Sprint] Re: How to get an ATS-3B?
> To: AT_Sprint@yahoogroups.com
> Date: Sunday, October 26, 2008, 7:52 PM
>
>
>
>
>
>
>
> The creator of the rig, Steve Weber KD1JV, mentions on his web site
> that he may have another run of the ATS-3B kits around Christmas.
Keep
> an eye on his web site.
>
> http://kd1jv. qrpradio. com/
>
> Better yet, keep an eye out here on the group as kit offerings are

> usually announced here first!
>
> Perhaps you could email him and let him know you are interested in
> getting a kit, this may help him decide to go ahead with another
run. I
> picked up my second ATS-3B in the last run and will be starting to
> assemble it soon. Going to try the hot air soldering method this
time.
>
> Jim K6JF
>

3715. Re: Solder Paste

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-27 04:14:14 UTC
From: radio_kx0r
Topic: 3713 Message: 3715

--- In AT_Sprint@yahoogroups.com, J. Haynes <eggs.4.iggs@...> wrote:

All,

I noticed that my paste became drier and less sticky during the long session last Halloween night when I placed and soldered my parts for my "B".

We have very low humidity here. I think that moisture or perhaps some solvent like alcohol evaporates from the paste.

In the commercial environment boards loaded with parts normally would not sit around for long before being run through the oven to reflow the solder. The time that the paste is exposed to air is usually not several hours or more.

On commercial production lines, the paste is printed on the boards with screens, and it must stay where it belongs and also hold the parts that are placed by machines. Consistent behavior of the paste is critical to the process.

Others have suggested doing the board in sections, and this might be good.

Hopefully someone who knows more about the paste can tell us if whatever evaporates from the paste can be "put back" - like can the paste be made sticky by adding a little water or alcohol?

Of course, others have suggested keeping the paste in the refrigerator for storage - just be sure to let it warm up before using it.

Maybe we should ask Cash Olson...

72/73

Carey
KX0R

> My year-old paste has worked pretty well. It's less creamy, but the solder turns out the same.
> Jonathan kc7fys
>

3716. Re: Solder Paste

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-27 04:39:35 UTC
From: Jim Fraser
Topic: 3713 Message: 3716

I too have kept the paste in the fridge. One thing I did not do was let it warm up to room temperature first, did not know that. I will being doing part two of my practice project tomorrow and will let it come to room temp before using and see how it goes.

Jim K6JF

--- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@...> wrote:
>
> --- In AT_Sprint@yahoogroups.com, J. Haynes <eggs.4.iggs@> wrote:
>
> All,
>
> I noticed that my paste became drier and less sticky during the long
> session last Halloween night when I placed and soldered my parts for
> my "B".
>
> We have very low humidity here. I think that moisture or perhaps some
> solvent like alcohol evaporates from the paste.
>
> In the commercial environment boards loaded with parts normally would
> not sit around for long before being run through the oven to reflow
> the solder. The time that the paste is exposed to air is usually not
> several hours or more.
>
> On commercial production lines, the paste is printed on the boards
> with screens, and it must stay where it belongs and also hold the
> parts that are placed by machines. Consistent behavior of the paste
> is critical to the process.
>
> Others have suggested doing the board in sections, and this might be
> good.
>
> Hopefully someone who knows more about the paste can tell us if
> whatever evaporates from the paste can be "put back" - like can the
> paste be made sticky by adding a little water or alcohol?
>

> Of course, others have suggested keeping the paste in the
refrigerator
> for storage - just be sure to let it warm up before using it.
>
> Maybe we should ask Cash Olson...
>
> 72/73
>
> Carey
> KX0R
>
> > My year-old paste has worked pretty well. It's less creamy, but
the
> solder turns out the same.
> > Jonathan kc7fys
> >
>

3717. Re: Solder Paste

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-27 04:53:26 UTC
From: Jim Fraser
Topic: 3713 Message: 3717

I too have kept the paste in the fridge. One thing I did not do was let it warm up to room temperature first, did not know that. I will being doing part two of my practice project tomorrow and will let it come to room temp before using and see how it goes.

Jim K6JF

--- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@...> wrote:
>
> --- In AT_Sprint@yahoogroups.com, J. Haynes <eggs.4.iggs@> wrote:
>
> All,
>
> I noticed that my paste became drier and less sticky during the long
> session last Halloween night when I placed and soldered my parts for
> my "B".
>
> We have very low humidity here. I think that moisture or perhaps some
> solvent like alcohol evaporates from the paste.
>
> In the commercial environment boards loaded with parts normally would
> not sit around for long before being run through the oven to reflow
> the solder. The time that the paste is exposed to air is usually not
> several hours or more.
>
> On commercial production lines, the paste is printed on the boards
> with screens, and it must stay where it belongs and also hold the
> parts that are placed by machines. Consistent behavior of the paste
> is critical to the process.
>
> Others have suggested doing the board in sections, and this might be
> good.
>
> Hopefully someone who knows more about the paste can tell us if
> whatever evaporates from the paste can be "put back" - like can the
> paste be made sticky by adding a little water or alcohol?
>

> Of course, others have suggested keeping the paste in the
refrigerator
> for storage - just be sure to let it warm up before using it.
>
> Maybe we should ask Cash Olson...
>
> 72/73
>
> Carey
> KX0R
>
> > My year-old paste has worked pretty well. It's less creamy, but
the
> solder turns out the same.
> > Jonathan kc7fys
> >
>

3718. ATS-1 update

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-27 08:10:18 UTC
From: Per-Arne Asp
Topic: 3718 Message: 3718

Does anyone know if there is a s/w update for ATS-1 with the 2313 processor? Or free/open source code?

The programming pins are aviable for programming. I use Atmel processors in my work so I have the ability and tools to program them.

72/3 de p-a, se4a/sm4inv

3719. Re: [AT_Sprint] Re: How to get an ATS-3B? - portable operating

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-27 11:11:26 UTC
From: steve d
Topic: 3705 Message: 3719

Thanks for the info, Carey.

You outlined some of my exact problems over my 3 day trip. I took my 857, NorCal doublet, and 971 tuner by Mighty Fine Junk (minus the front panel and top cover to shave a bit of weight). The biggest issue I ran in to was finding a tree in the right place when putting up my antenna. The second night I decided to plan where I put the tent around where the trees were. This still didn't work to well. Since I was with a group where I was the only ham it was a bit more frustrating in not having the time to really sit at the rig and try for many QSO's. The temperature also played a big role in that - I was in the tent to sleep and try to stay warm HI. At temps in the mid 20's Saturday night and not being equipped for it, the radio was about the last thing I wanted to mess with!

All in all I had 15lbs of radio gear - rig, tuner, antenna, battery. The weight never really came across as a problem. It slowed me down going up hills, but that was about it. The rest of my soreness and rashes would have happened no matter if I had 50lbs or 35lbs.

I need to get some new backpacking gear regardless of the radio - tent and sleeping bag mainly, plus a few clothing items. That should shave some lbs there and make me more comfortable.

Heres the rest of the story:

http://www.kc8qvo.com/2008/10/backpacking-in-dolly-sods-wilderness.html

Steve, KC8QVO

--- On Mon, 10/27/08, radio_kx0r <careyfuller@...> wrote:

From: radio_kx0r <careyfuller@...>
Subject: [AT_Sprint] Re: How to get an ATS-3B?
To: AT_Sprint@yahoogroups.com
Date: Monday, October 27, 2008, 12:02 AM

--- In AT_Sprint@yahoogrou ps.com, steve d <kc8qvo@...> wrote:

Steve,

There were at least two runs of the ATS-3B. There were at least two
runs of the ATS-3A also. I don't know the earlier history, but there
were several models over several years, and possibly multiple runs of
some.

With an ATS rig you can get that backpack load down to a few pounds -
or even less, if you make choices and are creative.

Beware that QRP portable is often frustrating, it's full of surprises
and problems, and things rarely work out just the way you plan.
Either there are not enough trees, or there are way too many.

Sometimes the weight and line go right over the tree at just the right spot, and then it gets stuck in the branches and won't drop.

It's really fun if you don't mind the hassles - it's really a game where you make some of the rules and then adjust to everything else.

You can do a lot with 3 or 4 pounds!

.

3720. Re: How to get an ATS-3B? - portable operating

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-27 13:25:22 UTC
From: scott mcmullen
Topic: 3705 Message: 3720

--- In AT_Sprint@yahoogroups.com, steve d <kc8qvo@...> wrote:
> I need to get some new backpacking gear regardless of the radio - tent and sleeping bag mainly, plus a few clothing items. That should shave some lbs there and make me more comfortable.
>
> Heres the rest of the story:

Awesome writeup and photos, Steve,

Backpacking with an FT-857 would be tough; it draws so much current!

If you haven't discovered it yet, the 'Adventure Radio Society' is a group that specializes in wilderness QRP trips.

http://arsqrp.pbwiki.com/

I also have a few backpacking QRP pictures at:

http://www.geocities.com/scottamcmullen/wildernessQrp.htm

73
Scott
W5ESE

3721. Re: [AT_Sprint] Re: How to get an ATS-3B? - portable operating

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-27 16:51:26 UTC
From: steve d
Topic: 3705 Message: 3721

Thanks for the info and notes, Scott. Yeah, I do have a thermarest trail lite reg pad. I bought it last year and haven't gone camping anywhere without it since - even in the heat of the summer. Thats the green thing rolled up on the top of the pack in several pictures on the blog.

As for lots of juice with the 857 - yep. I took a 12ah SLA. I was anticipating working JOTA but as it turned out I didn't. I just recieved with the rig mostly. I did try for a few QSO's but every time I got on there (40m cw) someone was either on my frequency already or took it after I claimed it. Oh well. Better luck next time I guess.

Steve, KC8QVO

--- On Mon, 10/27/08, scott mcmullen <scottamcmullen@...> wrote:

From: scott mcmullen <scottamcmullen@...>
Subject: [AT_Sprint] Re: How to get an ATS-3B? - portable operating
To: AT_Sprint@yahoogroups.com
Date: Monday, October 27, 2008, 9:25 AM

Awesome writeup and photos, Steve,

Backpacking with an FT-857 would be tough; it draws so much
current!

If you haven't discovered it yet, the 'Adventure Radio Society'
is a group that specializes in wilderness QRP trips.

http://arsqrp. pbwiki.com/

I also have a few backpacking QRP pictures at:

http://www.geocitie s.com/scottamcmu llen/wildernessQ rp.htm
.

3722. Re: [AT_Sprint] Re: How to get an ATS-3B? - portable operating

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-27 18:34:59 UTC
From: Hank Greeb
Topic: 3705 Message: 3722

Steve:

If you like 40/30/20 metres, the Portable Field Radio (PFR-3) is essentially a 3 band version of the ATS3b, complete with a digital display, a antenna coupler, and a nice enclosure, for around $200. It is available from http;//www.qrpkits.com. It uses discrete parts, except for the CPU and some other surface mount parts, but these are installed at qrpkits. It has band switching vs plug in band modules for the ATS3 series, otherwise it is "essentially" a close variant to the ATS-3b.

If you don't mind being limited to 2 bands, KD1JV is promising a 2 band rig, with choice of any two bands, to be released sometime in the near future. I believe that qrpkits will be offering that kit also.

72.73 de n8xx Hg

scott mcmullen wrote:
> --- In AT_Sprint@yahoogroups.com, steve d <kc8qvo@...> wrote:
>
>> I need to get some new backpacking gear regardless of the radio -
>>
> tent and sleeping bag mainly, plus a few clothing items. That
> should shave some lbs there and make me more comfortable.
>
>>
>> Heres the rest of the story:
>>
>
> Awesome writeup and photos, Steve,
>
> Backpacking with an FT-857 would be tough; it draws so much
> current!
>
> If you haven't discovered it yet, the 'Adventure Radio Society'
> is a group that specializes in wilderness QRP trips.
>
> http://arsqrp.pbwiki.com/
>
> I also have a few backpacking QRP pictures at:
>
> http://www.geocities.com/scottamcmullen/wildernessQrp.htm
>
> 73
> Scott
> W5ESE

3723. Re: [AT_Sprint] Re: How to get an ATS-3B? - portable operating

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-28 17:11:49 UTC
From: Kurt Savegnago
Topic: 3705 Message: 3723

I also thought the 3b was going to be reissued at some point.

Kurt KC9LDH

--- On Mon, 10/27/08, Hank Greeb <n8xx@...> wrote:

> From: Hank Greeb <n8xx@...>
> Subject: Re: [AT_Sprint] Re: How to get an ATS-3B? - portable operating
> To: AT_Sprint@yahoogroups.com
> Date: Monday, October 27, 2008, 1:34 PM
> Steve:
>
> If you like 40/30/20 metres, the Portable Field Radio
> (PFR-3) is
> essentially a 3 band version of the ATS3b, complete with a
> digital
> display, a antenna coupler, and a nice enclosure, for
> around $200. It
> is available from http;//www.qrpkits.com. It uses discrete
> parts,
> except for the CPU and some other surface mount parts, but
> these are
> installed at qrpkits. It has band switching vs plug in
> band modules for
> the ATS3 series, otherwise it is "essentially" a
> close variant to the
> ATS-3b.
>
> If you don't mind being limited to 2 bands, KD1JV is
> promising a 2 band
> rig, with choice of any two bands, to be released sometime
> in the near
> future. I believe that qrpkits will be offering that kit
> also.
>
> 72.73 de n8xx Hg
>://docs.yahoo.com/info/terms/

3724. Re: [AT_Sprint] Re: How to get an ATS-3B? - portable operating

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-28 17:24:15 UTC
From: Hank Greeb
Topic: 3705 Message: 3724

Kurt:

KD1JV has said that he hopes to have another run of the ATS-3b kits available for Christmas. That was early this spring, before he went on an extended hike along the Appalachian trail.

But, several folks have had glowing reports about the PFR-3, because of the ruggedness, visibility (bright yellow), the fact that it has a digital frequency readout, is completely self contained including an antenna coupler, etc. I hope I have some "stuff" sold by the next time the 3b kits are available because of it's lightness, and the fact that I like 80 metres, which isn't available on the PFR-3.

72/73 de n8xx Hg

Kurt Savegnago wrote:
> I also thought the 3b was going to be reissued at some point.
>
> Kurt KC9LDH

3725. Re: How to get an ATS-3B? - portable operating

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-28 18:55:54 UTC
From: Jim Fraser
Topic: 3705 Message: 3725

Steve also had a run of 3B kits this Summer, I got one in August. The manual now includes a section about using solder paste and the kit also included the resistor for the 'E' mod.

Jim K6JF

3726. Re: Using Flux With Solder Paste

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-28 19:06:58 UTC
From: Jim Fraser
Topic: 3706 Message: 3726

Well, my solder paste is definitely not as creamy as what I see in all the videos on the web, even after letting it warm to room temperature before using. Last year I had also ordered some paste from Cash for a SoftRock project and it was also on the dry side. Maybe it dries out too much in the shipping from NM to CA?

On the tube from last year I added a few small drops of water which seemed to soften it up a bit, may need a bit more. Its worth a shot.

If all else fails, there ia a local source that sells solder paste I may try. It is more expensive at $15 for 15 grams, but at least I can check it out before buying it.

Jim K6JF

3727. Iambic heaven

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-29 02:47:04 UTC
From: Ken Lotts
Topic: 3718 Message: 3727

Woo Hoo!

After a few emails back and forth with Michael Harnage about iambic parameters, my ATS3B now has a totally new iambic feel that I am extremely happy with.

I apparently had learned code on a keyer that emulated the "Accukeyer". As it turns out, the Accukeyer is an exaggeration of the iambic B-mode.

Some key differences (no pun intended) using the letter "C" as an example:

-- Mode A iambic generation of the letter "C"
squeeze both paddles (dah before dit) and let go of both after hearing the last dit.

-- Mode B iambic generation of the letter "C"
squeeze both paddles (dah before dit) and let go of both after hearing a certain percentage of the second dah.
note.. the ATS3B mode-B is 50% (other rigs may be less)

-- Accukeyer iambic generation of the letter "C"
squeeze both paddles (dah before dit) and let go of both after hearing *any* percentage of the second dah.

There are two timing loops (labeled dita and dota) that Mike showed me in the ATS3B firmware code that can be remarked-out to convert the current mode-B to Accukeyer. After remarking-out those two timing loops, I found that keying the ATS3B was a wonderful experience. Your mileage may vary...

Thanks Mike!

de
Ken Lotts
AA7JC

3728. RE: [AT_Sprint] Iambic heaven

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-29 02:56:36 UTC
From: Ken Lotts
Topic: 3718 Message: 3728

correction.. dota and dasha
darn!
-----Original Message-----
From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com]On Behalf Of Ken Lotts
Sent: Tuesday, October 28, 2008 7:47 PM
To: AT_Sprint@yahoogroups.com
Subject: [AT_Sprint] Iambic heaven

Woo Hoo!

After a few emails back and forth with Michael Harnage about iambic parameters, my ATS3B now has a totally new iambic feel that I am extremely happy with.

I apparently had learned code on a keyer that emulated the "Accukeyer". As it turns out, the Accukeyer is an exaggeration of the iambic B-mode.

Some key differences (no pun intended) using the letter "C" as an example:

-- Mode A iambic generation of the letter "C"
squeeze both paddles (dah before dit) and let go of both after hearing the last dit.

-- Mode B iambic generation of the letter "C"
squeeze both paddles (dah before dit) and let go of both after hearing a certain percentage of the second dah.
note.. the ATS3B mode-B is 50% (other rigs may be less)

-- Accukeyer iambic generation of the letter "C"
squeeze both paddles (dah before dit) and let go of both after hearing *any* percentage of the second dah.

There are two timing loops (labeled dita and dota) that Mike showed me in the ATS3B firmware code that can be remarked-out to convert the current mode-B to Accukeyer. After remarking-out those two timing loops, I found that keying the ATS3B was a wonderful experience. Your mileage may vary...

Thanks Mike!

de
Ken Lotts
AA7JC

3729. Re: How to get an ATS-3B? - portable operating

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-29 02:58:59 UTC
From: qwasty
Topic: 3705 Message: 3729

It's kind of a shame that the best solution to getting an ATS-3B is to get a different radio. I understand this radio is a labor of love, but I'd like to mention that many good businesses fail because they can't keep up with orders. If supply never catches up with demand, eventually demand shifts elsewhere. I think this radio could do really well from a business point of view because it can do multiband digital in a tiny little package. If it were available assembled, tested, and packaged in a neat little unit, I'd buy it, and I'm sure a few thousand other people would too. Make a small 10 to 50 watt amplifier available, and a few thousand more will buy it. Add a few more features and it will be competive with radios like the Icom IC-703 Plus, except at half the price or less, with better performance, and focused on the almost totally unserved CW/digital niche market. Off the top of my head I can't think of a multiband radio focused on digital.

If any of the deciders are reading (KD1JV), I think this radio might be nearly ready for prime time if only it were available. Maybe you've already thought of that too. What do you think?

--- In AT_Sprint@yahoogroups.com, Hank Greeb <n8xx@...> wrote:
>
> Kurt:
>
> KD1JV has said that he hopes to have another run of the ATS-3b kits
> available for Christmas. That was early this spring, before he
went on
> an extended hike along the Appalachian trail.
>
> But, several folks have had glowing reports about the PFR-3,
because of
> the ruggedness, visibility (bright yellow), the fact that it has a
> digital frequency readout, is completely self contained including an
> antenna coupler, etc. I hope I have some "stuff" sold by the next
time
> the 3b kits are available because of it's lightness, and the fact
that I
> like 80 metres, which isn't available on the PFR-3.
>
> 72/73 de n8xx Hg
>
> Kurt Savegnago wrote:
> > I also thought the 3b was going to be reissued at some point.
> >
> > Kurt KC9LDH

>

3730. Re: How to get an ATS-3B? - portable operating

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-29 04:10:28 UTC
From: radio_kx0r
Topic: 3705 Message: 3730

--- In AT_Sprint@yahoogroups.com, "qwasty" <qwasty@...> wrote:

Perhaps a different viewpoint here....

The PFR-3 is really the "people's version" of the ATS-3 radios. It is more rugged, is easier to build, and is much more complete than the ATS-3 radios.

The ATS radios are really designed for a small cult of operators who want the lightest possible unit, are willing to accept a delicate device, are able to complete the challenging SMT assembly, and who have the patience to build and adjust the filter modules.

The radio is a direct result of Steve Weber's own backpacking experience and his dream to have a radio so small and light that he could actually take it on tough trips and make real contacts. I doubt that it was ever intended as a big money maker. We are fortunate that Steve has shared it with us!

I think that only a few people have actually used the ATS-3B for digital modes, but the digital features open up the incredible frontier of tiny HF radios communicating digitally over large distances from remote places. This is a cult within a cult here! This is only the beginning. In a few years it will be possible to take tiny HF radios into the woods, communicate reliably and error-free at some acceptable rate, with less than a watt of power.

There are some real commercial possibilities here.

I love my ATS-3 radios, and I've had incredible fun with them. I'll always be grateful to Steve for working so hard to make this whole thing happen.

Even so, the ATS rigs are terrible entry level radios. They're tiny, sophisticated, specialized tools, and they're intended for people who've grown up with larger, more forgiving radios.

Several other companies offer a selection of nice QRP radios, many in kit form, that are much more suitable for newer ops or those with a broader range of interests and goals.

What I'd like to see is an ATS derivative that could run CW on 10 meters, and perhaps other bands. Even a single-band 10-meter dedicated rig would be such a kick to use! In a few years we'll have solar conditions that will let us work other continents with a couple of watts and a 17-foot dipole, or a whip vertical, from almost anywhere.

I know Steve was close to getting the ATS-3B up to 10 meters, but doing that would have compromised efficiency and other details of the design that we like. Nevertheless, I do think that if the timing were right, once 10 meters is open again regularly, many of these hypothetical 10 meter rigs could be sold to a global market. 10 meters is full of miracles when it's open, and QRP portable on 10 would be an ultimate experience.

We can dream...

72/73

Carey
KX0R

> It's kind of a shame that the best solution to getting an ATS-3B is
> to get a different radio. I understand this radio is a labor of
love,
> but I'd like to mention that many good businesses fail because they
> can't keep up with orders. If supply never catches up with demand,
> eventually demand shifts elsewhere. I think this radio could do
> really well from a business point of view because it can do
multiband
> digital in a tiny little package. If it were available assembled,
> tested, and packaged in a neat little unit, I'd buy it, and I'm
sure
> a few thousand other people would too. Make a small 10 to 50 watt
> amplifier available, and a few thousand more will buy it. Add a few
> more features and it will be competive with radios like the Icom
> IC-703 Plus, except at half the price or less, with better
> performance, and focused on the almost totally unserved CW/digital
> niche market. Off the top of my head I can't think of a multiband
> radio focused on digital.
>
> If any of the deciders are reading (KD1JV), I think this radio
might
> be nearly ready for prime time if only it were available. Maybe
> you've already thought of that too. What do you think?
>
>
>
> --- In AT_Sprint@yahoogroups.com, Hank Greeb <n8xx@> wrote:
> >
> > Kurt:
> >
> > KD1JV has said that he hopes to have another run of the ATS-3b
kits
> > available for Christmas. That was early this spring, before he
> went on
> > an extended hike along the Appalachian trail.
> >
> > But, several folks have had glowing reports about the PFR-3,

> because of
> > the ruggedness, visibility (bright yellow), the fact that it has a
> > digital frequency readout, is completely self contained including
an
> > antenna coupler, etc. I hope I have some "stuff" sold by the
next
> time
> > the 3b kits are available because of it's lightness, and the fact
> that I
> > like 80 metres, which isn't available on the PFR-3.
> >
> > 72/73 de n8xx Hg
> >
> > Kurt Savegnago wrote:
> > > I also thought the 3b was going to be reissued at some point.
> > >
> > > Kurt KC9LDH
> >
>

3731. NUE-PSK + ATS-3B = ATS-4

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-29 04:22:13 UTC
From: qwasty
Topic: 3731 Message: 3731

What if the ATS-3B were packed into the NUE-PSK modem, and they shared that big fancy display (by QRP standards)? That'd be a radio everybody could use whether they're into CW or not. It'd also be an impressive survival or backpacking radio.

What if I'm the one that gets hurt in my backpacking group and I'm not able to operate the radio? A PSK31 setup like that could be operated by anybody in an emergency situation with only a few minutes of instruction beforehand.

People who aren't functional in CW don't have many options in the QRP world, so they're almost totally unserved and excluded by the QRP ultra light portable cottage industry. Maybe the ATS series of radios can suck them in with it's digital capabilites.

Speaking of ultralights, I've always wanted to get into flying ultralight aircraft. Naturally, they can't carry very much, and a teeny radio would go great with them.

Just some thoughts.

3732. Re: [AT_Sprint] NUE-PSK + ATS-3B = ATS-4

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-29 14:26:45 UTC
From: steve@cyakr.com
Topic: 3731 Message: 3732

Looks like a good idea, but I'm not taking a keyboard backpacking! ;-)

> What if the ATS-3B were packed into the NUE-PSK modem, and they
> shared that big fancy display (by QRP standards)? That'd be a radio
> everybody could use whether they're into CW or not. It'd also be an
> impressive survival or backpacking radio.
>
> What if I'm the one that gets hurt in my backpacking group and I'm
> not able to operate the radio? A PSK31 setup like that could be
> operated by anybody in an emergency situation with only a few minutes
> of instruction beforehand.
>
> People who aren't functional in CW don't have many options in the QRP
> world, so they're almost totally unserved and excluded by the QRP
> ultra light portable cottage industry. Maybe the ATS series of radios
> can suck them in with it's digital capabilites.
>
> Speaking of ultralights, I've always wanted to get into flying
> ultralight aircraft. Naturally, they can't carry very much, and a
> teeny radio would go great with them.
>
> Just some thoughts.
>
>

3733. Re: [AT_Sprint] Re: How to get an ATS-3B? - portable operating

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-29 14:44:24 UTC
From: Kurt Savegnago
Topic: 3705 Message: 3733

Yeah,

I got one of each. Now to sit down and get them built!

Kurt

--- On Tue, 10/28/08, Hank Greeb <n8xx@...> wrote:

> From: Hank Greeb <n8xx@...>
> Subject: Re: [AT_Sprint] Re: How to get an ATS-3B? - portable operating
> To: AT_Sprint@yahoogroups.com
> Date: Tuesday, October 28, 2008, 12:24 PM
> Kurt:
>
> KD1JV has said that he hopes to have another run of the
> ATS-3b kits
> available for Christmas. That was early this spring,
> before he went on
> an extended hike along the Appalachian trail.
>
> But, several folks have had glowing reports about the
> PFR-3, because of
> the ruggedness, visibility (bright yellow), the fact that
> it has a
> digital frequency readout, is completely self contained
> including an
> antenna coupler, etc. I hope I have some "stuff"
> sold by the next time
> the 3b kits are available because of it's lightness,
> and the fact that I
> like 80 metres, which isn't available on the PFR-3.
>
> 72/73 de n8xx Hg
>
> Kurt Savegnago wrote:
> > I also thought the 3b was going to be reissued at some
> point.
> >
> > Kurt KC9LDH
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>

>

3734. Re: How to get an ATS-3B? - portable operating

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-29 17:17:12 UTC
From: mlangenf
Topic: 3705 Message: 3734

While we're dreaming, what I'd REALLY like to see is an ATS derivative covering 10 and 6. (10 can be "miraculous," but they don't call 6 "the Magic Band" for nothing.) I would think that combo alone would be a sure winner.

72,

Mark -- WA9ETW

--- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@...> wrote:
>
>
> What I'd like to see is an ATS derivative that could run CW on 10
> meters, and perhaps other bands. Even a single-band 10-meter
> dedicated rig would be such a kick to use! In a few years we'll
> have solar conditions that will let us work other continents with a
> couple of watts and a 17-foot dipole, or a whip vertical, from
> almost anywhere.
>
> I know Steve was close to getting the ATS-3B up to 10 meters, but
> doing that would have compromised efficiency and other details of
> the design that we like. Nevertheless, I do think that if the
> timing were right, once 10 meters is open again regularly, many of
> these hypothetical 10 meter rigs could be sold to a global
> market. 10 meters is full of miracles when it's open, and QRP
> portable on 10 would be an ultimate experience.
>
> We can dream...
>
> 72/73
>
> Carey
> KX0R
>
>

3735. Re: How to get an ATS-3B? - portable operating

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-29 17:34:52 UTC
From: Jim Fraser
Topic: 3705 Message: 3735

Add 12m to that it would complete the dream. Coverage from 80m - 6m
with ATS QRP!

Jim K6JF

--- In AT_Sprint@yahoogroups.com, "mlangenf" <mlangen@...> wrote:
>
> While we're dreaming, what I'd REALLY like to see is an ATS
> derivative covering 10 and 6. (10 can be "miraculous," but they
don't
> call 6 "the Magic Band" for nothing.) I would think that combo
alone
> would be a sure winner.
>
> 72,
>
> Mark -- WA9ETW
>
> --- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@>
> wrote:
> >
> >
> > What I'd like to see is an ATS derivative that could run CW on 10
> > meters, and perhaps other bands. Even a single-band 10-meter
> > dedicated rig would be such a kick to use! In a few years we'll
> > have solar conditions that will let us work other continents with
a
> > couple of watts and a 17-foot dipole, or a whip vertical,
from
> > almost anywhere.
> >
> > I know Steve was close to getting the ATS-3B up to 10 meters, but
> > doing that would have compromised efficiency and other details of
> > the design that we like. Nevertheless, I do think that if
the
> > timing were right, once 10 meters is open again regularly, many
of
> > these hypothetical 10 meter rigs could be sold to a
global
> > market. 10 meters is full of miracles when it's open, and
QRP
> > portable on 10 would be an ultimate experience.
> >
> > We can dream...
> >

> > 72/73
> >
> > Carey
> > KX0R
> >
> >
>

3736. Re: How to get an ATS-3B? - portable operating

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-29 18:23:48 UTC
From: qwasty
Topic: 3705 Message: 3736

Then after that we'd need a 2m, 1.25m, and 70cm version. Then, we'd need a microwave version 1.2ghz to 24ghz. Isn't there a ham band around 900mhz? That one we'll leave out so that people can still find something to improve on.

--- In AT_Sprint@yahoogroups.com, "Jim Fraser" <jimf53@...> wrote:
>
> Add 12m to that it would complete the dream. Coverage from 80m - 6m
> with ATS QRP!
>
> Jim K6JF
>
> --- In AT_Sprint@yahoogroups.com, "mlangenf" <mlangen@> wrote:
> >
> > While we're dreaming, what I'd REALLY like to see is an ATS
> > derivative covering 10 and 6. (10 can be "miraculous," but they
> don't
> > call 6 "the Magic Band" for nothing.) I would think that combo
> alone
> > would be a sure winner.
> >
> > 72,
> >
> > Mark -- WA9ETW
> >
> > --- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@>
> > wrote:
> > >
> > >
> > > What I'd like to see is an ATS derivative that could run CW on
> 10
> > > meters, and perhaps other bands. Even a single-band 10-meter
> > > dedicated rig would be such a kick to use! In a few years
> we'll
> > > have solar conditions that will let us work other continents
> with
> > a
> > > couple of watts and a 17-foot dipole, or a whip vertical,
> > from
> > > almost anywhere.
> > >
> > > I know Steve was close to getting the ATS-3B up to 10 meters,
> but
> > > doing that would have compromised efficiency and other details
> of

> > > the design that we like. Nevertheless, I do think that if
> the
> > > timing were right, once 10 meters is open again regularly, many
> of
> > > these hypothetical 10 meter rigs could be sold to a
> global
> > > market. 10 meters is full of miracles when it's open, and
> QRP
> > > portable on 10 would be an ultimate experience.
> > >
> > > We can dream...
> > >
> > > 72/73
> > >
> > > Carey
> > > KX0R
> > >
> > >
> >
>

3737. Dreaming about the "next" ATS variant

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-29 18:49:55 UTC
From: Hank Greeb
Topic: 3705 Message: 3737

The "problem" with higher bands is that a higher clock speed is necessary for the frequency sympathizer (DDS). As I gather, the clock speed must be 2X or greater the desired output frequency, perhaps even more. For 6 metres that would mean at very minimum a 110 MHz clock speed.

Other suggestions have been for 160 metres, for inclusion of 3 or 4 digits in a digital readout, etc. Most of us folks, including me, are illiterate dolts when it comes to the fine points of transceiver design, so we keep begging for more!

It appears to me that Steve has done wonders within a limited budget to get the ATS-3b designed, debugged, and developed to this point.

But, dream on - maybe Steve or someone else will expand the ideas presented.

72/73 de n8xx Hg

Jim Fraser wrote:
> Add 12m to that it would complete the dream. Coverage from 80m - 6m
> with ATS QRP!
>
> Jim K6JF
>
> --- In AT_Sprint@yahoogroups.com, "mlangenf" <mlangen@...> wrote:
>
>> While we're dreaming, what I'd REALLY like to see is an ATS derivative covering 10 and 6. (10 can be "miraculous," but they don't call 6 "the Magic Band" for nothing.) I would think that combo alone would be a sure winner.
>>
>> 72,
>>
>> Mark -- WA9ETW
>>
>> --- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@> wrote:
>>
>>> What I'd like to see is an ATS derivative that could run CW on 10 meters, and perhaps other bands. Even a single-band 10-meter dedicated rig would be such a kick to use! In a few years we'll have solar conditions that will let us work other continents with a couple of watts and a 17-foot dipole, or a whip vertical, from almost anywhere.
>>>
>>> I know Steve was close to getting the ATS-3B up to 10 meters, but doing that would have compromised efficiency and other details of the design that we like. Nevertheless, I do think that if the timing were right, once 10 meters is open again regularly, many of these hypothetical 10 meter rigs could be sold to a global market. 10 meters is full of miracles when it's open, and QRP portable on 10 would be an ultimate experience.
>>>

```
>>> We can dream...
>>>
>>> 72/73
>>>
>>> Carey
>>> KX0R
```

3738. Re: Dreaming about the "next" ATS variant

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-29 20:18:10 UTC
From: mlangenf
Topic: 3705 Message: 3738

I wasn't at all suggesting an 80 (or 160) through 6 (or 2, or whatever) ATS-XX. Although I'll be the very last to denigrate Steve or his remarkable design accomplishments, such an assignment might tax even his abilities and budget.

My "dream" high-sunspot-number QRP rig covers only 10 and 6 (CW-only OK), but remains small, light and very portable (on an Altoids-tin scale). And I have to think I'm not the only one who feels that way. But, as Hank properly points out, such a rig would likely take a good chunk of fresh thinking by someone far more knowledgeable than me (us).

Good it doesn't cost anything to dream (yet).

72,

Mark -- WA9ETW

P.S. I also agree that, if you try to add everything but the "kitchen sink" to the ATS-3A/B, it won't be an ATS-3A/B anymore. Steve really hit the sweet spot with these purpose-designed/built rigs. They are what they are (iconic?), and fulfill their intended roles to a T. Don't mess with success!

--- In AT_Sprint@yahoogroups.com, Hank Greeb <n8xx@...> wrote:
>
>
> The "problem" with higher bands is that a higher clock speed is
> necessary for the frequency sympathizer (DDS). As I gather, the
> clock speed must be 2X or greater the desired output frequency,
> perhaps even more. For 6 metres that would mean at very minimum a
> 110 MHz clock speed.
>
> Other suggestions have been for 160 metres, for inclusion of 3 or 4
> digits in a digital readout, etc. Most of us folks, including me,
> are illiterate dolts when it comes to the fine points of
> transceiver design, so we keep begging for more!
>
> It appears to me that Steve has done wonders within a limited
> budget to get the ATS-3b designed, debugged, and developed to this
> point.
>
> But, dream on - maybe Steve or someone else will expand the ideas
> presented.
>
> 72/73 de n8xx Hg

>

3739. RE: [AT_Sprint] Dreaming about the "next" ATS variant

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-29 20:44:35 UTC
From: ken Lotts (at home)
Topic: 3705 Message: 3739

What Steve has done is design the world's most practical and affordable trail radio and then shared all of his work. What else compares?

The first time I saw it on his web site, I was truly in disbelief.

There aint nothing bad about this radio!

It weighs what, 3 oz? (again, what else compares?)

It has a built-in keyer

It has a crystal lattice CW filter

It has open firmware source code ***WOW****

It will send almost three watts with only nine volts

It uses DDS

It uses commonly available parts

It has a built in battery meter

The list goes on..

I have learned a ton from this project.

Thanks Steve!

From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com] On Behalf Of Hank Greeb
Sent: Wednesday, October 29, 2008 11:50 AM
To: AT_Sprint@yahoogroups.com
Subject: [AT_Sprint] Dreaming about the "next" ATS variant

The "problem" with higher bands is that a higher clock speed is necessary for the frequency sympathizer (DDS). As I gather, the clock speed must be 2X or greater the desired output frequency, perhaps even more. For 6 metres that would mean at very minimum a 110 MHz clock speed.

Other suggestions have been for 160 metres, for inclusion of 3 or 4 digits in a digital readout, etc. Most of us folks, including me, are illiterate dolts when it comes to the fine points of transceiver design, so we keep begging for more!

It appears to me that Steve has done wonders within a limited budget to get the ATS-3b designed, debugged, and developed to this point.

But, dream on - maybe Steve or someone else will expand the ideas presented.

72/73 de n8xx Hg

Jim Fraser wrote:
> Add 12m to that it would complete the dream. Coverage from 80m - 6m
> with ATS QRP!
>
> Jim K6JF
>
> --- In AT_Sprint@yahoogroups.com <mailto:AT_Sprint%40yahoogroups.com> ,
"mlangenf" <mlangen@...> wrote:
>
>> While we're dreaming, what I'd REALLY like to see is an ATS derivative
covering 10 and 6. (10 can be "miraculous," but they don't call 6 "the Magic
Band" for nothing.) I would think that combo alone would be a sure winner.
>>
>> 72,
>>
>> Mark -- WA9ETW
>>
>> --- In AT_Sprint@yahoogroups.com <mailto:AT_Sprint%40yahoogroups.com> ,
"radio_kx0r" <careyfuller@> wrote:
>>
>>> What I'd like to see is an ATS derivative that could run CW on 10
meters, and perhaps other bands. Even a single-band 10-meter dedicated rig
would be such a kick to use! In a few years we'll have solar conditions that
will let us work other continents with a couple of watts and a 17-foot
dipole, or a whip vertical, from almost anywhere.
>>>
>>> I know Steve was close to getting the ATS-3B up to 10 meters, but doing
that would have compromised efficiency and other details of the design that
we like. Nevertheless, I do think that if the timing were right, once 10
meters is open again regularly, many of these hypothetical 10 meter rigs
could be sold to a global market. 10 meters is full of miracles when it's
open, and QRP portable on 10 would be an ultimate experience.
>>>
>>> We can dream...
>>>
>>> 72/73
>>>
>>> Carey
>>> KX0R

3740. Re: [AT_Sprint] Re: How to get an ATS-3B? - portable operating

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-29 21:00:21 UTC
From: Steven Carr
Topic: 3705 Message: 3740

qwasty,

I don't recall seeing anywhere that the ATS-3B was a business venture, therefore I would prefer you not criticize as if it were so.

Putting out a kit such as this is quite a task...unless you are willing to give up your personal life. I know this from personal experience as I have participated in putting out such a kit. If you have any doubts about the extent of the effort involved, I would challenge you to try putting out your own kit.

I will suggest that if you are not patient enough to wait for the xmas (?) run, then maybe you aren't patient enough to put a challenging surface mount kit together. Spend the meantime making sure your kit building skills are honed, perhaps by building that PFR-3.

I apologize in advance if you think there was some "bite" in this email...that was not the intent. I was just trying to provide feedback regarding an email that would have royally pissed me off if it had been directed my way. ;-)

steve
ae4yq

1...2...3...4...5...6...7...8...9...10...click send...oh crap, where's the recall button!!!

qwasty wrote:
>
> It's kind of a shame that the best solution to getting an ATS-3B is
> to get a different radio. I understand this radio is a labor of love,
> but I'd like to mention that many good businesses fail because they
> can't keep up with orders. If supply never catches up with demand,
> eventually demand shifts elsewhere. I think this radio could do
> really well from a business point of view because it can do multiband
> digital in a tiny little package. If it were available assembled,
> tested, and packaged in a neat little unit, I'd buy it, and I'm sure
> a few thousand other people would too. Make a small 10 to 50 watt
> amplifier available, and a few thousand more will buy it. Add a few
> more features and it will be competive with radios like the Icom
> IC-703 Plus, except at half the price or less, with better
> performance, and focused on the almost totally unserved CW/digital
> niche market. Off the top of my head I can't think of a multiband
> radio focused on digital.
>
> If any of the deciders are reading (KD1JV), I think this radio might
> be nearly ready for prime time if only it were available. Maybe

> you've already thought of that too. What do you think?
>
> --- In AT_Sprint@yahoogroups.com <mailto:AT_Sprint%40yahoogroups.com>,
> Hank Greeb <n8xx@...> wrote:
> >
> > Kurt:
> >
> > KD1JV has said that he hopes to have another run of the ATS-3b kits
> > available for Christmas. That was early this spring, before he
> went on
> > an extended hike along the Appalachian trail.
> >
> > But, several folks have had glowing reports about the PFR-3,
> because of
> > the ruggedness, visibility (bright yellow), the fact that it has a
> > digital frequency readout, is completely self contained including an
> > antenna coupler, etc. I hope I have some "stuff" sold by the next
> time
> > the 3b kits are available because of it's lightness, and the fact
> that I
> > like 80 metres, which isn't available on the PFR-3.
> >
> > 72/73 de n8xx Hg
> >
> > Kurt Savegnago wrote:
> > > I also thought the 3b was going to be reissued at some point.
> > >
> > > Kurt KC9LDH
> >
>
>

3741. Re: [AT_Sprint] Re: How to get an ATS-3B? - portable operating

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-29 21:45:23 UTC
From: John A. Evans - N0HJ
Topic: 3705 Message: 3741

Steven is quite correct. Historically, Steve Weber would create a single run of kits for the general ham population. I personally suspect he just wanted to get a nice professionally made board for himself, so he would do a run of 50 to get a decent price on the boards, but I say this with tongue in cheek. It has only been since the advent of the ATS line of rigs that he has done multiple runs. Thankfully, he is opening up more and providing designs for clubs and actual business ventures such as QRP Kits to produce so that more can share in his designs.

72 - john -n0hj

Steven Carr wrote:
>
>
> qwasty,
>
> I don't recall seeing anywhere that the ATS-3B was a business venture,
> therefore I would prefer you not criticize as if it were so.
>

3742. iambic algorithm

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-30 00:14:08 UTC
From: Steven Carr
Topic: 3718 Message: 3742

several years ago I coded up a project which had a iambic keyer included and tried investigating the iambic A vs B in regards to the actual algorithm used, only to find descriptions that confused me more than they helped. unfortunately I had to make some assumptions regarding iambic A and iambic B based merely on how I believe I would have designed the original circuits. what I came up with is that the main difference between mode B and mode A is whether the paddle inputs are latched or not.

since the original keyers were made with discrete gates and latches, one assumption that I made is that both iambic modes had to be easily implementable with the gates and latches in use at the time, therefore I refused to have arbitrary delays such as half a dah time.

iambic mode A is simple enough. press a key and an element (either a dit or a dah) is keyed out, followed by a space (1 dit-time). the decision as to which element is keyed out next (depending on which keys are pressed) is then determined based on the actual paddle inputs.

iambic mode A sounds great in theory and works ok, but what about scenarios like dit-insertion. hold down the dah key, tap the dit key, then release the dah key. the problem is if you tap the dit key too quickly then you get a M instead of a K because you released the dit key before the start of the next element (no dit key at this instant therefore no dit on the output). I made an assumption that iambic B was designed with input latching to allow some slop in the inputs so that the timing is less critical.

enter the latch. with iambic B, when it is time to key out the next element the decision is made based not on the actual paddle inputs but rather on latched paddle inputs. thus to key out a K hold the dah key and tap the dit key anytime before the dit is to be keyed...if you release "too soon" (w.r.t. mode A) you still get the dit (because of the input latch) that you would have missed with mode A. for my keyer (implemented in software) I reset the input latch for the element last keyed just prior to checking the input latches for the next element to be keyed. since the earliest keyers were based on gates rather than software I suspect for simplicity the input latch was reset while that element was being keyed out (thus reseting before the trailing space rather than after it, not a difference I would notice in operation).

the main thing that everyone not actually trying to implement a keyer seems to focus on is whether you get the trailing dit or dah. the reason for the trailing dit/dah is because that key's input has been latched.

I am curious about the mode A and mode B algorithms in the ATS-3B. also I would like to know if anyone is aware of a proper reference that describes, from an algorithm point of view, the iambic A and iambic B modes in enough detail that it could be used to confirm or deny my description above. since much of the above is based on "how I would do it", I'd like to know if it is spot on or way off. ;-) regardless it seemed to work well for me and I never got complaints regarding it.

also here is a link to a schematic of the Accu-keyer with gates and latches. note the latched paddle inputs. does anyone feel like exercising their digital circuits skills to determine what this thing actually does?
http://www.vk1od.net/EA78Accukeyer/index.htm

Steve
ae4yq

Ken Lotts wrote:
>
> Woo Hoo!
>
> After a few emails back and forth with Michael Harnage about iambic
> parameters, my ATS3B now has a totally new iambic feel that I am
> extremely happy with.
>
> I apparently had learned code on a keyer that emulated the
> "Accukeyer". As it turns out, the Accukeyer is an exaggeration of the
> iambic B-mode.
>
> Some key differences (no pun intended) using the letter "C" as an example:
>
> -- Mode A iambic generation of the letter "C"
> squeeze both paddles (dah before dit) and let go of both after hearing
> the last dit.
>
> -- Mode B iambic generation of the letter "C"
> squeeze both paddles (dah before dit) and let go of both after hearing
> a certain percentage of the second dah.
> note.. the ATS3B mode-B is 50% (other rigs may be less)
>
> -- Accukeyer iambic generation of the letter "C"
> squeeze both paddles (dah before dit) and let go of both after hearing
> *any* percentage of the second dah.
>
> There are two timing loops (labeled dita and dota) that Mike showed me
> in the ATS3B firmware code that can be remarked-out to convert the
> current mode-B to Accukeyer. After remarking-out those two timing
> loops, I found that keying the ATS3B was a wonderful experience. Your
> mileage may vary...
>
> Thanks Mike!
>

> de
> Ken Lotts
> AA7JC
>
>
>

3743. Re: How to get an ATS-3B? - portable operating

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-30 04:09:40 UTC
From: radio_kx0r
Topic: 3705 Message: 3743

--- In AT_Sprint@yahoogroups.com, "mlangenf" <mlangen@...> wrote:

Mark,

I can think of three reasons we don't see many of these specialized low-VHF rigs:

1) Propagation on these bands depends on high solar activity, which varies. Anyone designing rigs for these bands would have to plan ahead so he could sell his kits while interest is high.

2) There are some pretty good arguments for double conversion. This avoids the high DDS clock, but it requires a more complex circuit with more mixers and another oscillator.

3) Much of the activity on these bands is SSB, not CW, and many customers probably would really rather have SSB. This again makes the radio more complex. If a linear amplifier is used, power consumption goes up. Now we need a larger battery....

We're already far away from the ATS design.

Nevertheless, today's technology makes a very small SSB rig for these bands possible.

Maybe someone is already designing this rig...maybe it will be one of MFJ's hot offerings in a couple of years...

> While we're dreaming, what I'd REALLY like to see is an ATS
> derivative covering 10 and 6. (10 can be "miraculous," but they don't
> call 6 "the Magic Band" for nothing.) I would think that combo alone
> would be a sure winner.
>
> 72,
>
> Mark -- WA9ETW
>
> --- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@>
> wrote:
> >
> >
> > What I'd like to see is an ATS derivative that could run CW on 10
> > meters, and perhaps other bands. Even a single-band 10-meter
> > dedicated rig would be such a kick to use! In a few years we'll
> > have solar conditions that will let us work other continents with

a
> > couple of watts and a 17-foot dipole, or a whip vertical,
from
> > almost anywhere.
> >
> > I know Steve was close to getting the ATS-3B up to 10 meters, but
> > doing that would have compromised efficiency and other details of
> > the design that we like. Nevertheless, I do think that if
the
> > timing were right, once 10 meters is open again regularly, many
of
> > these hypothetical 10 meter rigs could be sold to a
global
> > market. 10 meters is full of miracles when it's open, and
QRP
> > portable on 10 would be an ultimate experience.
> >
> > We can dream...
> >
> > 72/73
> >
> > Carey
> > KX0R
> >
> >
>

3744. Re: Dreaming about the "next" ATS variant

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-30 04:26:13 UTC
From: radio_kx0r
Topic: 3705 Message: 3744

--- In AT_Sprint@yahoogroups.com, Hank Greeb <n8xx@...> wrote:

Hank,

You're right about the DDS clock. Steve wrote a message about the problem many months ago. It's on this site way back somewhere.

However, our rigs might work on 160M if the firmware supported it - at least no one has said "NO" to this idea. The toroids on the filter module might have to be wound on something stronger than red #2 powdered iron to keep the number of turns reasonable. That's easy.

A fairly serious external antenna tuner would also be required. I have a BLT that covers 160M, and it's not rocket science - but you need something like that, especially if you want to run short antennas.

Never mind that the band is best in mid-winter, and most of us aren't doing QRP portable then. Putting up a dipole - or anything else full-size - for 160M in the woods in winter snow would take some determination.

However, I have operated on 80M in January snow at 9000 feet, with the ATS-3B, and it was fun. All I had was a 40M diple and a modified BLT, but I made QSO's and was getting out pretty well. I'll definitely do it again this winter.

Yeah, I wish it would run on 160 - just so I could say I did it - I've never operated portable on 160M yet. Maybe this year I'll drag out my FT-817...and a big battery...that radio eats electrons...

72/73

KX0R

>
> The "problem" with higher bands is that a higher clock speed is
> necessary for the frequency sympathizer (DDS). As I gather, the
clock
> speed must be 2X or greater the desired output frequency, perhaps
even
> more. For 6 metres that would mean at very minimum a 110 MHz clock
speed.
>
> Other suggestions have been for 160 metres, for inclusion of 3 or 4
> digits in a digital readout, etc. Most of us folks, including me,
are

> illiterate dolts when it comes to the fine points of transceiver
design,
> so we keep begging for more!
>
> It appears to me that Steve has done wonders within a limited
budget to
> get the ATS-3b designed, debugged, and developed to this point.
>
> But, dream on - maybe Steve or someone else will expand the ideas
presented.
>
> 72/73 de n8xx Hg
>
> Jim Fraser wrote:
> > Add 12m to that it would complete the dream. Coverage from 80m -
6m
> > with ATS QRP!
> >
> > Jim K6JF
> >
> > --- In AT_Sprint@yahoogroups.com, "mlangenf" <mlangen@> wrote:
> >
> >> While we're dreaming, what I'd REALLY like to see is an ATS
derivative covering 10 and 6. (10 can be "miraculous," but they don't
call 6 "the Magic Band" for nothing.) I would think that combo alone
would be a sure winner.
> >>
> >> 72,
> >>
> >> Mark -- WA9ETW
> >>
> >> --- In AT_Sprint@yahoogroups.com, "radio_kx0r" <careyfuller@>
wrote:
> >>
> >>> What I'd like to see is an ATS derivative that could run CW on
10 meters, and perhaps other bands. Even a single-band 10-meter
dedicated rig would be such a kick to use! In a few years we'll have
solar conditions that will let us work other continents with a couple
of watts and a 17-foot dipole, or a whip vertical, from almost
anywhere.
> >>>
> >>> I know Steve was close to getting the ATS-3B up to 10 meters,
but doing that would have compromised efficiency and other details of
the design that we like. Nevertheless, I do think that if the timing
were right, once 10 meters is open again regularly, many of these
hypothetical 10 meter rigs could be sold to a global market. 10
meters is full of miracles when it's open, and QRP portable on 10
would be an ultimate experience.
> >>>
> >>> We can dream...

> >>>
> >>> 72/73
> >>>
> >>> Carey
> >>> KX0R
>

3745. Re: Dreaming about the "next" ATS variant

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-30 04:27:36 UTC
From: radio_kx0r
Topic: 3705 Message: 3745

--- In AT_Sprint@yahoogroups.com, "ken Lotts \(at home\)" <ken@...>
wrote:

Ken,

I had the same reaction when I first saw it! Then I was terrified
that I couldn't ever build it!

KX0R
>
> What Steve has done is design the world's most practical and
affordable
> trail radio and then shared all of his work. What else compares?
>
>
>
> The first time I saw it on his web site, I was truly in disbelief.
>
> There aint nothing bad about this radio!
>
>
>
> It weighs what, 3 oz? (again, what else compares?)
>
> It has a built-in keyer
>
> It has a crystal lattice CW filter
>
> It has open firmware source code ***WOW****
>
> It will send almost three watts with only nine volts
>
> It uses DDS
>
> It uses commonly available parts
>
> It has a built in battery meter
>
> The list goes on..
>
>
>
> I have learned a ton from this project.
>
>
>

> Thanks Steve!
>
>
>
>
>
> From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com]
On Behalf
> Of Hank Greeb
> Sent: Wednesday, October 29, 2008 11:50 AM
> To: AT_Sprint@yahoogroups.com
> Subject: [AT_Sprint] Dreaming about the "next" ATS variant
>
>
>
>
> The "problem" with higher bands is that a higher clock speed is
> necessary for the frequency sympathizer (DDS). As I gather, the
clock
> speed must be 2X or greater the desired output frequency, perhaps
even
> more. For 6 metres that would mean at very minimum a 110 MHz clock
speed.
>
> Other suggestions have been for 160 metres, for inclusion of 3 or 4
> digits in a digital readout, etc. Most of us folks, including me,
are
> illiterate dolts when it comes to the fine points of transceiver
design,
> so we keep begging for more!
>
> It appears to me that Steve has done wonders within a limited
budget to
> get the ATS-3b designed, debugged, and developed to this point.
>
> But, dream on - maybe Steve or someone else will expand the ideas
presented.
>
> 72/73 de n8xx Hg
>
> Jim Fraser wrote:
> > Add 12m to that it would complete the dream. Coverage from 80m -
6m
> > with ATS QRP!
> >
> > Jim K6JF
> >
> > --- In AT_Sprint@yahoogroups.com <mailto:AT_Sprint%
40yahoogroups.com> ,
> "mlangenf" <mlangen@> wrote:

> >
> >> While we're dreaming, what I'd REALLY like to see is an ATS
derivative
> covering 10 and 6. (10 can be "miraculous," but they don't call
6 "the Magic
> Band" for nothing.) I would think that combo alone would be a sure
winner.
> >>
> >> 72,
> >>
> >> Mark -- WA9ETW
> >>
> >> --- In AT_Sprint@yahoogroups.com <mailto:AT_Sprint%
40yahoogroups.com> ,
> "radio_kx0r" <careyfuller@> wrote:
> >>
> >>> What I'd like to see is an ATS derivative that could run CW on
10
> meters, and perhaps other bands. Even a single-band 10-meter
dedicated rig
> would be such a kick to use! In a few years we'll have solar
conditions that
> will let us work other continents with a couple of watts and a 17-
foot
> dipole, or a whip vertical, from almost anywhere.
> >>>
> >>> I know Steve was close to getting the ATS-3B up to 10 meters,
but doing
> that would have compromised efficiency and other details of the
design that
> we like. Nevertheless, I do think that if the timing were right,
once 10
> meters is open again regularly, many of these hypothetical 10 meter
rigs
> could be sold to a global market. 10 meters is full of miracles
when it's
> open, and QRP portable on 10 would be an ultimate experience.
> >>>
> >>> We can dream...
> >>>
> >>> 72/73
> >>>
> >>> Carey
> >>> KX0R
>

3746. Re: How to get an ATS-3B? - portable operating

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-30 04:44:42 UTC
From: radio_kx0r
Topic: 3705 Message: 3746

--- In AT_Sprint@yahoogroups.com, "John A. Evans - N0HJ"
<jaevans@...> wrote:

John,

At the very least the ATS thing will go down as one of the most
incredible recent efforts in ham radio. Many people have found an
exciting corner of the hobby here.

Steve Weber has been a good listener - I know of several little
problems that he fixed in the "B" model - or that he told us how to
fix. He even reprogrammed some processors in at least two
instances! I can't imagine how he did all the jobs required to
release and support so many radios and other products.

The best kick is still coming - when we get high solar activity, we
can take these radios out for some amazing contacts on 20, 17, and 15
meters.

72/73
KX0R

>
> Steven is quite correct. Historically, Steve Weber would create a
> single run of kits for the general ham population. I personally
suspect
> he just wanted to get a nice professionally made board for himself,
so
> he would do a run of 50 to get a decent price on the boards, but I
say
> this with tongue in cheek. It has only been since the advent of
the ATS
> line of rigs that he has done multiple runs. Thankfully, he is
opening
> up more and providing designs for clubs and actual business
ventures
> such as QRP Kits to produce so that more can share in his designs.
>
> 72 - john -n0hj
>
> Steven Carr wrote:
> >
> >
> > qwasty,
> >
> > I don't recall seeing anywhere that the ATS-3B was a business

venture,
> > therefore I would prefer you not criticize as if it were so.
> >
>

3747. Re: [AT_Sprint] Re: Dreaming about the "next" ATS variant

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-30 11:30:27 UTC
From: Vojtěch Bubník
Topic: 3705 Message: 3747

To extend firmware to support 160M is a piece of cake. Only issue may be detection of the newer band.

To support higher bands is another issue. The DDS in ATS-3b supports maximum clock of 70MHh. Recommended maximum generated output frequency is about 1/3 of the clock, which is 23MHz. Also steepness of the DDS filter will become an issue. To support higher bands reliably one either needs to use faster DDS or another approach (premixer like in K1 or analog VFO/VXO or PLL). Faster DDS will consume considerable higher current and produce considerable heat.

Another issue which is not that obvious is that there are higher requirements on the sensitivity and noise floor for higher bands. Look at the RX input circuit. The filter input is shunted by 50 ohm resistor. I believe the resistor has two puprposes. To attenuate antenna signal and to match filter impedance. The attenuation will became unwanted on higher bands.

Also dynamic range requirements are higher on higher bands. DDS spurs become an issue if there are strong signals next to weak ones, imagine contest situation with kW PAs and high gain antennas again. Strong signals will mix with DDS spurs and produce strong birdies. The difference in required dynamic range on low and high bands is caused exactly by high gain directional antennas.

73, Vojtech OK1IAK

3748. FW: [AT_Sprint] Re: Dreaming about the "next" ATS variant

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-30 11:36:37 UTC
From: Dale Putnam
Topic: 3705 Message: 3748

It seems to me that 160 would be the next choice. What better place for a challange....? The top band, biggest requirement for "big" antennas, and the "smallest" real pack radio....
Well, ok, it is a stretch, but then, it would be cool to have 160.--... ...--Dale - WC7S in Wy

To: AT_Sprint@yahoogroups.comFrom: bubnikv@...: Thu, 30 Oct 2008 12:30:27 +0100Subject: Re: [AT_Sprint] Re: Dreaming about the "next" ATS variant

To extend firmware to support 160M is a piece of cake. Only issue may be detection of the newer band.To support higher bands is another issue. The DDS in ATS-3b supports maximum clock of 70MHh. Recommended maximum generated output frequency is about 1/3 of the clock, which is 23MHz. Also steepness of the DDS filter will become an issue. To support higher bands reliably one either needs to use faster DDS or another approach (premixer like in K1 or analog VFO/VXO or PLL). Faster DDS will consume considerable higher current and produce considerable heat.Another issue which is not that obvious is that there are higher requirements on the sensitivity and noise floor for higher bands. Look at the RX input circuit. The filter input is shunted by 50 ohm resistor. I believe the resistor has two puprposes. To attenuate antenna signal and to match filter impedance. The attenuation will became unwanted on higher bands.Also dynamic range requirements are higher on higher bands. DDS spurs become an issue if there are strong signals next to weak ones, imagine contest situation with kW PAs and high gain antennas again. Strong signals will mix with DDS spurs and produce strong birdies. The difference in required dynamic range on low and high bands is caused exactly by high gain directional antennas.73, Vojtech OK1IAK

_____
You live life beyond your PC. So now Windows goes beyond your PC.
http://clk.atdmt.com/MRT/go/115298556/direct/01/

3749. The ATS cult

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-10-30 22:41:14 UTC
From: J. Haynes
Topic: 3749 Message: 3749

Maybe it was Carey who said it, but 'cult' is very apt, given the difficulty I've had explaining theobsession to non-hams around me. Steve's design, along with JN1GLB's excellent frequency display mod, Vojtec's ongoing mods, and the contributions of so many have made it a really fun ride. I'm trying to goad Ken to reveal some of the commonsense mods that he's made to the W1MT firmware.
There's a lot of collective talent that goes into this culty rig.
Jonathan 7J1AWL

3750. QBSA question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-01 18:05:29 UTC
From: n8ewy
Topic: 3750 Message: 3750

My question is:

1. I see a place on the main board to connect a lead for the self contained power supply. It is, I assume for the positive (or hot) line. I assume this would go to the center pin of a DC connector. In the case of my 3-B, the 0.7mm power connector. Where does one bring a ground from, on the main board, to the outside connection of the 0.7mm power connector? Or don't you need to?

2. Are there any Mods that anyone can think of that have come up with since the QBSA came out? Any idea where to look them up? I have done some "googling" of the subject, but didn't come up with much.

Dohn N8EWY

3751. Re: QBSA question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-02 01:49:00 UTC
From: Jim Fraser
Topic: 3750 Message: 3751

Dohn:

That's how I did it. The hot line from the DC Input power jack goes to VIN and the ground lead to the pad G next to it. However, in my case I added a front panel switch in the hot line so that VIN is actually connected to one side of the switch.

There is only one mod I know of to increase the output voltage to 12v. You can find that in the Files section of this group. Good luck.

Jim K6JF

--- In AT_Sprint@yahoogroups.com, "n8ewy" <n8ewy@...> wrote:
>
> My question is:
>
> 1. I see a place on the main board to connect a lead for the self
> contained power supply. It is, I assume for the positive (or hot)
> line. I assume this would go to the center pin of a DC connector.
In
> the case of my 3-B, the 0.7mm power connector. Where does one
bring a
> ground from, on the main board, to the outside connection of the
0.7mm
> power connector? Or don't you need to?
>
> 2. Are there any Mods that anyone can think of that have come up
with
> since the QBSA came out? Any idea where to look them up? I have
done
> some "googling" of the subject, but didn't come up with much.
>
> Dohn N8EWY
>

3752. Re: QBSA question

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-02 05:11:46 UTC
From: radio_kx0r
Topic: 3750 Message: 3752

--- In AT_Sprint@yahoogroups.com, "n8ewy" <n8ewy@...> wrote:

Dohn,

Please see several photos of my QBSA in the Photos section here on this site. These show how I did the wiring and connectors. Click on the "Large" photos and you probably can see every wire. You are free to do it any way you like.

In the Files section I posted instructions for how to increase the regulated power supply to 12 volts. This is optional and at your own risk. You'll need a higher input voltage, almost 15 volts, if you choose to regulate the output at 12.0 volts.

There also was an update to the code that was done for some of the later units - Steve was very helpful with this for some of us.

Good luck - the QBSA is a really neat accessory!

72/73

Carey
KX0R

> My question is:
>
> 1. I see a place on the main board to connect a lead for the self
> contained power supply. It is, I assume for the positive (or hot)
> line. I assume this would go to the center pin of a DC connector.
In
> the case of my 3-B, the 0.7mm power connector. Where does one
bring a
> ground from, on the main board, to the outside connection of the
0.7mm
> power connector? Or don't you need to?
>
> 2. Are there any Mods that anyone can think of that have come up
with
> since the QBSA came out? Any idea where to look them up? I have
done
> some "googling" of the subject, but didn't come up with much.
>
> Dohn N8EWY
>

3753. Re: iambic algorithm

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-04 05:36:33 UTC
From: Markus
Topic: 3718 Message: 3753

--- In AT_Sprint@yahoogroups.com, Steven Carr <steve@...> wrote:
> I would like to know if anyone is aware of a proper reference that
> describes, from an algorithm point of view, the iambic A and iambic B
> modes in enough detail that it could be used to confirm or deny my
> description above.

See this explanation written by Chuck Olson WB9KZY:
http://home.att.net/~jacksonharbor/modeab.pdf

My personal experience: I was unable to get along with the original
ATS-3B keyer, but after loading W1MT's firmware everything is just fine.

73, Markus HB9BRJ

3754. where's the cap?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-04 13:23:03 UTC
From: Dale Putnam
Topic: 3754 Message: 3754

where's the better places to get a 22j, cap for the filter board? for C1F on the 17 mtr board?
Not sure.. but the little guy musta been scared, and ran away...
Anyone have an extra? Or where to order, would be better?
--... ...--Dale - WC7S in Wy

_____
When your life is on the go—take your life with you.
http://clk.atdmt.com/MRT/go/115298558/direct/01/

3755. Re: [AT_Sprint] Re: iambic algorithm

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-04 23:33:26 UTC
From: Steven Carr
Topic: 3718 Message: 3755

I had already seen this .pdf, but I certainly appreciate the effort.

Because of the lack of a real algorithm description I get the impression
that a lot of designers who try to implement iambic B are having to
guess at what it is supposed to be.

I'm pretty sure that iambic B didn't come around simply because of a
need for a trailing element, that's why I focused on the latched inputs
in my explanation of the iambic A vs B.

I can see the latched inputs on the AccuKeyer circuit, though I'm not
yet following the entire circuit yet. My main uncertainty is whether
the latches are reset before or after the trailing space in the
AccuKeyer circuit.

I did try reading the ATS-3B assy code, but I'm being hampered by my
unfamiliarity with that processor.

Steve
ae4yq

Markus wrote:
>
> --- In AT_Sprint@yahoogroups.com <mailto:AT_Sprint%40yahoogroups.com>,
> Steven Carr <steve@...> wrote:
> > I would like to know if anyone is aware of a proper reference that
> > describes, from an algorithm point of view, the iambic A and iambic B
> > modes in enough detail that it could be used to confirm or deny my
> > description above.
>
> See this explanation written by Chuck Olson WB9KZY:
> http://home.att.net/~jacksonharbor/modeab.pdf
> <http://home.att.net/%7Ejacksonharbor/modeab.pdf>
>
> My personal experience: I was unable to get along with the original
> ATS-3B keyer, but after loading W1MT's firmware everything is just fine.
>
> 73, Markus HB9BRJ
>
>

3756. ATS3B & QBSA for sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-05 00:07:40 UTC
From: n2uz
Topic: 2399 Message: 3756

I am selling my 3B and QBSA. I used RCA connectors on the Altoid tin for the antenna and frequency for the QBSA and I will supply 2 BNC/RCA adapters for them so you can just use BNC cables for both. Both units have Anderson power poles on the ends of their power cables. I have the filter boards in 2 other Altoids tins for storage. Comes with the CD's.
Price $165 for the 3B and $45 for the QBSA, or $200 for both. I would like to sell them as a set. I am selling so I can get the PFR3.
PayPal is preferred. Postage $7.00. CONUS only.
Jerry , N2UZ

3757. FET tool

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-05 02:55:42 UTC
From: Ken Lotts
Topic: 2399 Message: 3757

Does anyone use the TI MSP-FET430UIF?

I have just bought one (with the development board) and I have a few questions.

It flashes the ATS3B OK but it wont let the ATS3B run correctly while it is connected. Also I can not run the rig from the debugger. If I try the rig goes into overload with the "E" displayed.

The JTAG --> ATS cable was built as follows:

JTAG ATS
09 -- 01 GND
08 -- 02 TST
11 -- 03 RST
07 -- 04 TCK
05 -- 05 TMS
03 -- 06 TDI
01 -- 07 TDO

Cable length is close to 14 inches overall (from the extit of the FET to the entrance of the ATS3B

Another problem I am having is flashing MCUs that I put in the ZIF socketed development board. It fails every time with the error "No device found or device disconnected"

I have the MSP-FET430X110 that works from a parallel port and it does not have any of these problems.. I can run the debugger and watch the ATS variables.. I can flash a MCU in its ZIF..

Ken Lotts
aa7jc

3758. Re: ATS3B & QBSA for sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-05 04:33:12 UTC
From: querencias
Topic: 2399 Message: 3758

Jerry,

if you'll take a check or money order I'd like to buy the QSBA.

My email is "tuquerencia@..."

72 de KT6L/ Grant

--- In AT_Sprint@yahoogroups.com, "n2uz" <jd.n2uz@...> wrote:
>
> I am selling my 3B and QBSA. I used RCA connectors on the Altoid tin
> for the antenna and frequency for the QBSA and I will supply 2 BNC/RCA
> adapters for them so you can just use BNC cables for both. Both units
> have Anderson power poles on the ends of their power cables. I have
> the filter boards in 2 other Altoids tins for storage. Comes with the
> CD's.
> Price $165 for the 3B and $45 for the QBSA, or $200 for both. I would
> like to sell them as a set. I am selling so I can get the PFR3.
> PayPal is preferred. Postage $7.00. CONUS only.
> Jerry , N2UZ
>

3759. Speaking of QBSA...

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-05 21:22:01 UTC
From: Jim Fraser
Topic: 2399 Message: 3759

Has anyone seen or figured out a mod to stop the flicker on the least significant digit?? Man that's annoying, I may have to go turn off that digit.

Jim K6JF

--- In AT_Sprint@yahoogroups.com, "Paul J. Beckmann" <wa0rse@...> wrote:
>
> There seems to be an interest in these two items and I haven't gotten around to starting
> either of these kits. I've opened them and inventoried parts but have not started building. If
> you want them, please e-mail me (first come, first served) at wa0rse@...
>
> ATS-3B $190 plus $5 shipping.
>
> QBSA $45 plus $5 shipping
>
> Shipped by priority mail. Payment by Paypal. I'll eat the Paypal charges.
>
> Merry Christmas!
>
> --Paul, wa0rse
>

3760. Re: ATS3B & QBSA for sale - SOLD

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-06 03:07:25 UTC
From: n2uz
Topic: 2399 Message: 3760

They are both sold.
Thank you.
Jerry

--- In AT_Sprint@yahoogroups.com, "n2uz" <jd.n2uz@...> wrote:
>
> I am selling my 3B and QBSA. I used RCA connectors on the Altoid tin
> for the antenna and frequency for the QBSA and I will supply 2 BNC/RCA
> adapters for them so you can just use BNC cables for both. Both units
> have Anderson power poles on the ends of their power cables. I have
> the filter boards in 2 other Altoids tins for storage. Comes with the
> CD's.
> Price $165 for the 3B and $45 for the QBSA, or $200 for both. I would
> like to sell them as a set. I am selling so I can get the PFR3.
> PayPal is preferred. Postage $7.00. CONUS only.
> Jerry , N2UZ
>

3761. Re: [AT_Sprint] ATS3B & QBSA for sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-06 04:29:03 UTC
From: Mike Cheng
Topic: 2399 Message: 3761

To: N2UZ

I see that you are selling your ATS-3B.
I am just wondering how you liked the use of the 3B?
---is the receiver gud or better then most qrp kits rigs out there?
Pse send rely, Tks

73/72

Mike

From: n2uz <jd.n2uz@...>
To: AT_Sprint@yahoogroups.com
Sent: Tuesday, November 4, 2008 7:07:40 PM
Subject: [AT_Sprint] ATS3B & QBSA for sale

I am selling my 3B and QBSA. I used RCA connectors on the Altoid tin
for the antenna and frequency for the QBSA and I will supply 2 BNC/RCA
adapters for them so you can just use BNC cables for both. Both units
have Anderson power poles on the ends of their power cables. I have
the filter boards in 2 other Altoids tins for storage. Comes with the
CD's.
Price $165 for the 3B and $45 for the QBSA, or $200 for both. I would
like to sell them as a set. I am selling so I can get the PFR3.
PayPal is preferred. Postage $7.00. CONUS only.
Jerry , N2UZ

3762. Re: [AT_Sprint] ATS3B & QBSA for sale

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-06 04:42:32 UTC
From: Stephen Wandling
Topic: 2399 Message: 3762

Mike,

I'm not about to sell my ATS3B, but I can tell you that its receiver is
as sensitive as my Icom 706MKII, and the 706 has great sensitivity.
That's my personal opinion.

And why anyone would prefer a PFR3 to the ATS3B is beyond me.

72
Stephen
VE7NSD

Mike Cheng wrote:
> To: N2UZ
>
> I see that you are selling your ATS-3B.
> I am just wondering how you liked the use of the 3B?
> ---is the receiver gud or better then most qrp kits rigs out there?
> Pse send rely, Tks
> 73/72
> Mike
>
> ---
> *From:* n2uz <jd.n2uz@...>
> *To:* AT_Sprint@yahoogroups.com
> *Sent:* Tuesday, November 4, 2008 7:07:40 PM
> *Subject:* [AT_Sprint] ATS3B & QBSA for sale
>
> I am selling my 3B and QBSA. I used RCA connectors on the Altoid tin
> for the antenna and frequency for the QBSA and I will supply 2 BNC/RCA
> adapters for them so you can just use BNC cables for both. Both units
> have Anderson power poles on the ends of their power cables. I have
> the filter boards in 2 other Altoids tins for storage. Comes with the
> CD's.
> Price $165 for the 3B and $45 for the QBSA, or $200 for both. I would
> like to sell them as a set. I am selling so I can get the PFR3.
> PayPal is preferred. Postage $7.00. CONUS only.
> Jerry , N2UZ
>
>
>

3763. Re: [AT_Sprint] Troubleshooter

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-06 04:37:26 UTC
From: Vojtěch Bubník
Topic: 3639 Message: 3763

Johnatan, did you get any help with your dead device?
73, Vojtech AB2ZA

> ------------ Původní zpráva ------------
> Od: kc7fys <kc7fys@yahoo.com>
> Předmět: [AT_Sprint] Troubleshooter
> Datum: 12.10.2008 05:46:33
> --
> I have reached the limit of my current abilities with troubleshooting
> my 3B. I would like to send just the board to one of you fellas to
> have a look at it. It worked fine for a year, hundreds of QSOs, then
> went ".8" during operation. I replaced the MPU and now can't flash the
> firmware. I would appreciate a volunteer to just accept it to look at
> at their leisure. Mail me offline. Could just be the firmware.
> Regards,
> Jonathan KC7FYS
>
>
>
>

3764. Butane Soldering Iron For SMT SMD work

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-06 22:37:10 UTC
From: qwasty
Topic: 3764 Message: 3764

I've been looking at some of the suggested soldering irons in this group. I'm wondering if a butane soldering iron can be suitable for SMT work? It's portable, just like the ATS-3B, and it can be used to start fires on a camping trip, or for impromptu solder fixups. The best part is that it can be used to blow heat, and maybe that would work well for solder paste.

Does anyone have any experience with using a butane iron for SMT SMD work? I did a google search for "smt butane iron" and I found one mention that Weller makes butane irons that work well as heat blowers, but it didn't mention WHICH butane iron specifically.

Like many people in this group, portability is key, and having a portable SMT workstation would just be ridiculously awesome. Almost as ridiculous as having a digital HF rig in an altoids tin, haha.

3765. Re: ATS3B & QBSA for sale - SOLD

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-06 22:42:41 UTC
From: qwasty
Topic: 2399 Message: 3765

I can't believe I missed this. I stopped checking messages for a few days, and THEN it starts getting interesting. Pffft.

--- In AT_Sprint@yahoogroups.com, "n2uz" <jd.n2uz@...> wrote:
>
> They are both sold.
> Thank you.
> Jerry
>
>
> --- In AT_Sprint@yahoogroups.com, "n2uz" <jd.n2uz@> wrote:
> >
> > I am selling my 3B and QBSA. I used RCA connectors on the Altoid tin
> > for the antenna and frequency for the QBSA and I will supply 2 BNC/RCA
> > adapters for them so you can just use BNC cables for both. Both units
> > have Anderson power poles on the ends of their power cables. I have
> > the filter boards in 2 other Altoids tins for storage. Comes with the
> > CD's.
> > Price $165 for the 3B and $45 for the QBSA, or $200 for both. I would
> > like to sell them as a set. I am selling so I can get the PFR3.
> > PayPal is preferred. Postage $7.00. CONUS only.
> > Jerry , N2UZ
> >
>

3766. Re: FET tool

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-06 22:47:38 UTC
From: Ken Lotts
Topic: 2399 Message: 3766

OK (FWIW) I figured out some of the problem.. First of all I was dyslexic. I bought the development board under the premis that it had a 28 pin ZIF socket for the MSP430F1232 but nope, it has a 28 pin ZIF socket for the MSP430F2132... a much smaller 28 pin mcu. for some reason I had not noticed how much smaller the chip was and the darn product number has the same numbers, just in a different order..... so once I compiled for the correct chip, I was able to get the test program to work on the development board. So all is well with the development board.

Now to figure out the reason the new FET disrupts the radio during normal operation just by having it connected.. probably a real easy answer as well..

de

Ken Lotts
aa7jc

--- In AT_Sprint@yahoogroups.com, "Ken Lotts" <ken@...> wrote:
>
> Does anyone use the TI MSP-FET430UIF?
>
> I have just bought one (with the development board) and I have a few
> questions.
>
> It flashes the ATS3B OK but it wont let the ATS3B run correctly
while it is
> connected. Also I can not run the rig from the debugger. If I try
the rig
> goes into overload with the "E" displayed.
>
> The JTAG --> ATS cable was built as follows:
>
> JTAG ATS
> 09 -- 01 GND
> 08 -- 02 TST
> 11 -- 03 RST
> 07 -- 04 TCK
> 05 -- 05 TMS
> 03 -- 06 TDI
> 01 -- 07 TDO
>
> Cable length is close to 14 inches overall (from the extit of the
FET to the
> entrance of the ATS3B

>
> Another problem I am having is flashing MCUs that I put in the ZIF
socketed
> development board. It fails every time with the error "No device
found or
> device disconnected"
>
> I have the MSP-FET430X110 that works from a parallel port and it
does not
> have any of these problems.. I can run the debugger and watch the
ATS
> variables.. I can flash a MCU in its ZIF..
>
> Ken Lotts
> aa7jc
>

3767. RE: [AT_Sprint] Butane Soldering Iron For SMT SMD work

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-06 23:09:43 UTC
From: ken Lotts (at home)
Topic: 3764 Message: 3767

Just speaking for myself, but when I am SMT soldering, I am thinking stability, intense lighting and a steady hand. ..

A Doofus <http://www.flickr.com/photos/lotts-family/2095179471> and good magnification are my friends

I study each joint individually before moving on.

Each <http://www.flickr.com/photos/lotts-family/1793838287> part deserves as much time as it takes to do it right.

Perfection, not compromise.

Ken Lotts

aa7jc

From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com] On Behalf Of qwasty
Sent: Thursday, November 06, 2008 3:37 PM
To: AT_Sprint@yahoogroups.com
Subject: [AT_Sprint] Butane Soldering Iron For SMT SMD work

I've been looking at some of the suggested soldering irons in this group. I'm wondering if a butane soldering iron can be suitable for SMT work? It's portable, just like the ATS-3B, and it can be used to start fires on a camping trip, or for impromptu solder fixups. The best part is that it can be used to blow heat, and maybe that would work well for solder paste.

Does anyone have any experience with using a butane iron for SMT SMD work? I did a google search for "smt butane iron" and I found one mention that Weller makes butane irons that work well as heat blowers, but it didn't mention WHICH butane iron specifically.

Like many people in this group, portability is key, and having a portable SMT workstation would just be ridiculously awesome. Almost as ridiculous as having a digital HF rig in an altoids tin, haha.

3768. Re: [AT_Sprint] Butane Soldering Iron For SMT SMD work

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-06 23:48:13 UTC
From: Bill Noyce
Topic: 3764 Message: 3768

Believe it or not, I used a Radio Shack butane soldering iron to complete practically all of my ATS-3 (not -B) kit. It has a fairly small tip (much smaller than the only other iron I had at the time), and the heat is reasonably adjustable. It comes with a "blowtorch" attachment too, but I used the soldering tip.

Not sure I would recommend this to a newbie, but it can work. The butane iron now lives in my QRP toolkit that fits in a pencil box -- a twin to the box that holds my ATS-3, tuner, headphones, battery, etc. It's cool to think about making repairs in the wilderness!

-- Bill, AB1AV

On Thu, Nov 6, 2008 at 5:37 PM, qwasty <qwasty@...> wrote:
> I've been looking at some of the suggested soldering irons in this
> group. I'm wondering if a butane soldering iron can be suitable for
> SMT work?

3769. Re: Butane Soldering Iron For SMT SMD work

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-07 05:02:34 UTC
From: kc7fys
Topic: 3764 Message: 3769

My experience with blowing heat is with a Hobby Lobby embossing tool (12$). My soldering turned out well, and removing/reinstalling the MPU was a 40 second job, literally. Hold it with tweezers and it just lifts out. My only warning is overheating--I made a little focussing nozzle from a small kitchen funnel with a 1cm diameter opening. It worked well, but the heat was proportionally more intense. I actually saw the surface of the PCB blister up, much to my horror as I quickly flicked the tool away. It caused no damage to the radio, but scared me. Hot air soldering is really fast and easy, but overheating is one concern.
Jonathan KC7FYS

3770. Re: Butane Soldering Iron For SMT SMD work

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-07 05:25:42 UTC
From: radio_kx0r
Topic: 3764 Message: 3770

--- In AT_Sprint@yahoogroups.com, "qwasty" <qwasty@...> wrote:

A bunch of us built our kits with the embossing tools - which means small hot air tools - from Hobby Lobby. This tool is amazing for what it is. It has the right amount of heat and just enough force to deliver it without blowing the parts off their pads.

The basic method can be found on Cash Olson's website:

http://www.zianet.com/erg/SMT_Soldering.html

You also can get some SMT solder paste there - a fair deal.

There are many messages here (stored on this site) about the hot air/solder paste method, plus many more about the one-joint-at-a-time methods. Both methods require patience and coordination, along with plenty of bright light and maybe more than the normal amount of caffeine....

I built an ATS-3A one joint at a time, and I did my "B" with the embossing tool and Cash Olson's paste. The paste method is a hobby version of commercial hot air reflow, and I believe you can do a real high quality job if you try.

The one additional recommendation I have applies to either SMT method:

Order a Norcal Dummy Load and build it first with the method you like. You'll get a useful, accurate QRP device, and you'll risk little. The confidence gained will help with building the radio.

Please use the SEARCH feature here if you want to read all the stuff we all wrote about a year ago.

72/73

Carey
KX0R

> I've been looking at some of the suggested soldering irons in this
> group. I'm wondering if a butane soldering iron can be suitable for
> SMT work? It's portable, just like the ATS-3B, and it can be used to
> start fires on a camping trip, or for impromptu solder fixups. The
> best part is that it can be used to blow heat, and maybe that would
> work well for solder paste.
>
> Does anyone have any experience with using a butane iron for SMT SMD
> work? I did a google search for "smt butane iron" and I found one
> mention that Weller makes butane irons that work well as heat

> blowers, but it didn't mention WHICH butane iron specifically.
>
> Like many people in this group, portability is key, and having a
> portable SMT workstation would just be ridiculously awesome. Almost
> as ridiculous as having a digital HF rig in an altoids tin, haha.
>

3771. Re: [AT_Sprint] Troubleshooter

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-07 06:05:38 UTC
From: J. Haynes
Topic: 3639 Message: 3771

I appreciate you asking Vojtec. Ken bailed me out, by replacing the DDS chip. Actually, Ken, if you'd say what the issue was, it might lead us to discussion of the reason this component failed. I can't.
Jonathan kc7fys

3772. Re: Butane Soldering Iron For SMT SMD work

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-07 10:34:48 UTC
From: jaakko330
Topic: 3764 Message: 3772

--- In AT_Sprint@yahoogroups.com, "qwasty" <qwasty@...> wrote:
>
> I've been looking at some of the suggested soldering irons in this
> group. I'm wondering if a butane soldering iron can be suitable for
> SMT work? It's portable, just like the ATS-3B, and it can be used to

Might work but is certainly a risky operation. I think the key point in the SMD soldering is the control of temperature and how fast you reach that temperature. With the butanol soldering iron you need a steady hand to keep the flame at just right distance. A small mistake and the components/board are damaged permanently.

73, Jaakko OH7BF/F5VGL

3773. RE: [AT_Sprint] Troubleshooter

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-07 12:42:12 UTC
From: Ken Lotts
Topic: 3639 Message: 3773

OK, well first of all the rig had a virgin unprogrammed MCU in it that could not be programmed via the JTAG connector.
Pins 26 & 27 on the MCU were near zero volts compared to 3.5 volts on a working rig. Those pins were tied to both the DDS chip AND the JTAG connector.
The DDS did not have any shorted pins but I did not spend a huge amount of time trying to analyze why it was messing up the MCU.
My first interest was getting the MCU programmed so I removed the DDS (since it was pulling down the voltage on pins 26&27). After removing the DDS the MCU accepted the firmware via the JTAG.
I then put in a new DDS chip and the radio perked to life with no issues.

Ken Lotts
aa7jc

-----Original Message-----
From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com]On Behalf Of J. Haynes
Sent: Thursday, November 06, 2008 11:06 PM
To: AT_Sprint@yahoogroups.com
Subject: Re: [AT_Sprint] Troubleshooter

I appreciate you asking Vojtec. Ken bailed me out, by replacing the DDS chip. Actually, Ken, if you'd say what the issue was, it might lead us to discussion of the reason this component failed. I can't.
Jonathan kc7fys

3774. RE: [AT_Sprint] Re: Butane Soldering Iron For SMT SMD work

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-07 14:30:46 UTC
From: ken Lotts (at home)
Topic: 3764 Message: 3774

Amen.

I use a temperature controlled
<http://www.flickr.com/photos/lotts-family/3010426828/> iron with a conical
<http://www.flickr.com/photos/lotts-family/3010426708/> tip. Oh, and
solder wick <http://www.flickr.com/photos/lotts-family/3009591813/> is an
essential tool in my shack. The more I use it the more I love it.

Ken Lotts

Aa7jc

From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com] On Behalf
Of jaakko330
Sent: Friday, November 07, 2008 3:35 AM
To: AT_Sprint@yahoogroups.com
Subject: [AT_Sprint] Re: Butane Soldering Iron For SMT SMD work

--- In AT_Sprint@yahoogroups.com <mailto:AT_Sprint%40yahoogroups.com> ,
"qwasty" <qwasty@...> wrote:
>
> I've been looking at some of the suggested soldering irons in this
> group. I'm wondering if a butane soldering iron can be suitable for
> SMT work? It's portable, just like the ATS-3B, and it can be used to

Might work but is certainly a risky operation. I think the key point
in the SMD soldering is the control of temperature and how fast you
reach that temperature. With the butanol soldering iron you need a
steady hand to keep the flame at just right distance. A small mistake
and the components/board are damaged permanently.

73, Jaakko OH7BF/F5VGL

3775. RE: [AT_Sprint] Re: Butane Soldering Iron For SMT SMD work

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-07 15:08:06 UTC
From: ken Lotts (at home)
Topic: 3764 Message: 3775

If you wick all the joints as clean as possible, the hot air portion of the job will be reduced to just a few seconds and thereby reduce possible component damage.
I use an Exacto knife to apply some wedging while I blow the hot air.

Ken

From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com] On Behalf Of kc7fys
Sent: Thursday, November 06, 2008 10:03 PM
To: AT_Sprint@yahoogroups.com
Subject: [AT_Sprint] Re: Butane Soldering Iron For SMT SMD work

My experience with blowing heat is with a Hobby Lobby embossing tool (12$). My soldering turned out well, and removing/reinstalling the MPU was a 40 second job, literally. Hold it with tweezers and it just lifts out. My only warning is overheating--I made a little focussing nozzle from a small kitchen funnel with a 1cm diameter opening. It worked well, but the heat was proportionally more intense. I actually saw the surface of the PCB blister up, much to my horror as I quickly flicked the tool away. It caused no damage to the radio, but scared me. Hot air soldering is really fast and easy, but overheating is one concern.
Jonathan KC7FYS

3776. Re: Butane Soldering Iron For SMT SMD work

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-07 17:49:47 UTC
From: qwasty
Topic: 3764 Message: 3776

What do you mean by "wedging"?

--- In AT_Sprint@yahoogroups.com, "ken Lotts \(at home\)" <ken@...>
wrote:
>
> If you wick all the joints as clean as possible, the hot air
portion of the
> job will be reduced to just a few seconds and thereby reduce
possible
> component damage.
> I use an Exacto knife to apply some wedging while I blow the hot
air.
>
> Ken
>
>
>
> From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com]
On Behalf
> Of kc7fys
> Sent: Thursday, November 06, 2008 10:03 PM
> To: AT_Sprint@yahoogroups.com
> Subject: [AT_Sprint] Re: Butane Soldering Iron For SMT SMD work
>
>
>
> My experience with blowing heat is with a Hobby Lobby embossing tool
> (12$). My soldering turned out well, and removing/reinstalling the
MPU
> was a 40 second job, literally. Hold it with tweezers and it just
> lifts out. My only warning is overheating--I made a little focussing
> nozzle from a small kitchen funnel with a 1cm diameter opening. It
> worked well, but the heat was proportionally more intense. I
actually
> saw the surface of the PCB blister up, much to my horror as I
quickly
> flicked the tool away. It caused no damage to the radio, but scared
> me. Hot air soldering is really fast and easy, but overheating is
one
> concern.
> Jonathan KC7FYS
>

3777. Re: Butane Soldering Iron For SMT SMD work

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-07 17:58:40 UTC
From: qwasty
Topic: 3764 Message: 3777

It sounds like a butane iron is not a good choice for a heat blower on a whole project, but maybe it's good enough for one or two components here and there? It would probably be easier to control if you were only doing one component, instead of trying to flow solder on the entire board all at once. I guess that could be generalized to say that no soldering iron can compete with a good heat blower for flowing solder on an entire board, but that they can be used for individual components. Does that sound about right?

--- In AT_Sprint@yahoogroups.com, "jaakko330" <oh7bf@...> wrote:
>
> --- In AT_Sprint@yahoogroups.com, "qwasty" <qwasty@> wrote:
> >
> > I've been looking at some of the suggested soldering irons in this
> > group. I'm wondering if a butane soldering iron can be suitable for
> > SMT work? It's portable, just like the ATS-3B, and it can be used to
>
> Might work but is certainly a risky operation. I think the key point
> in the SMD soldering is the control of temperature and how fast you
> reach that temperature. With the butanol soldering iron you need a
> steady hand to keep the flame at just right distance. A small mistake
> and the components/board are damaged permanently.
>
> 73, Jaakko OH7BF/F5VGL
>

3778. RE: [AT_Sprint] Re: Butane Soldering Iron For SMT SMD work

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-07 18:22:21 UTC
From: ken Lotts (at home)
Topic: 3764 Message: 3778

This only applies to multi pin devices.. simple SMD parts like resistors and capacitors etc can USUALLY just be blown off with the air nozzle. The idea is not damaging the board so always keep an eye on the temperature and exposure time.
The term "Wedge" refers to the action of prying the chip away from the board.

Wedge the blade so that it applies a force that will pop the device away from the circuit board once the solder is no longer firmly holding the pins down. This can be done on one side (right or left) of the chip if it only has two sides (like the MCU used in the ATS3B). I <http://www.flickr.com/photos/lotts-family/2899887785/in/set-72157601974674441/> sweep the air over the pins on both sides but focus mostly on the side that I am wedging. That way the other side is nearly ready to go when the first side gives. It happens real fast if you have wicked the solder to begin with. Quad sided devices (none on the ATS3B) don't give up one side.. its all or nothing. I would still pry at a corner while sweeping the hot air all around the pins if I had a single <http://www.flickr.com/photos/lotts-family/2898796106/in/set-72157601974674441/> jet nozzle. I have special nozzles for my hot air rework <http://www.flickr.com/photos/lotts-family/2898777750> station that actually shoot <http://www.flickr.com/photos/lotts-family/2900670030/in/set-72157601974674441/> air on all pins at the same time without heating the chip for that occasion.

Ken Lotts

AA7JC

From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com] On Behalf Of qwasty
Sent: Friday, November 07, 2008 10:50 AM
To: AT_Sprint@yahoogroups.com
Subject: [AT_Sprint] Re: Butane Soldering Iron For SMT SMD work

What do you mean by "wedging"?

--- In AT_Sprint@yahoogroups.com <mailto:AT_Sprint%40yahoogroups.com> , "ken Lotts \(at home\)" <ken@...>
wrote:
>
> If you wick all the joints as clean as possible, the hot air portion of the
> job will be reduced to just a few seconds and thereby reduce possible

> component damage.
> I use an Exacto knife to apply some wedging while I blow the hot
air.
>
> Ken
>
>
>
> From: AT_Sprint@yahoogroups.com <mailto:AT_Sprint%40yahoogroups.com>
[mailto:AT_Sprint@yahoogroups.com <mailto:AT_Sprint%40yahoogroups.com>]
On Behalf
> Of kc7fys
> Sent: Thursday, November 06, 2008 10:03 PM
> To: AT_Sprint@yahoogroups.com <mailto:AT_Sprint%40yahoogroups.com>
> Subject: [AT_Sprint] Re: Butane Soldering Iron For SMT SMD work
>
>
>
> My experience with blowing heat is with a Hobby Lobby embossing tool
> (12$). My soldering turned out well, and removing/reinstalling the
MPU
> was a 40 second job, literally. Hold it with tweezers and it just
> lifts out. My only warning is overheating--I made a little focussing
> nozzle from a small kitchen funnel with a 1cm diameter opening. It
> worked well, but the heat was proportionally more intense. I
actually
> saw the surface of the PCB blister up, much to my horror as I
quickly
> flicked the tool away. It caused no damage to the radio, but scared
> me. Hot air soldering is really fast and easy, but overheating is
one
> concern.
> Jonathan KC7FYS
>

3779. Re: Butane Soldering Iron For SMT SMD work

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-07 19:07:09 UTC
From: qwasty
Topic: 3764 Message: 3779

Great information, just great. You always put so much effort and care into your detailed posts, I really appreciate it. I especially like your photos, of course. A picture is worth a thousand words.

One technique I'd like to try for removing SMD's is to use thin stainless steel shim stock or feeler gage leaves (super thin sheet metal, thinner than tin or aluminum foil, but much stiffer, like a razor blade) to slide under the contacts of devices as soon as the solder softens. I haven't tried it yet, but I don't think solder will stick to stainless steel, so I can separate the pins of a device from the board at the precise moment the solder reaches it's melting temperature, and no hotter. Plus, I don't have to melt all the pins at the same time, since the shim physically blocks each pin from rebonding with the pads on the board.

It's been a long time since I've done any SMT soldering, but if I remember correctly, with practice I was able to solder and remove components so quickly and easily that they would only be warm after the process was complete. I've never damaged a component with heat before.

I'm getting pretty excited about this, maybe I'll have to quit talking and start doing. All in due time.

--- In AT_Sprint@...m, "ken Lotts \(at home\)" <ken@...>
wrote:
>
> This only applies to multi pin devices.. simple SMD parts like
resistors and
> capacitors etc can USUALLY just be blown off with the air nozzle.
The idea
> is not damaging the board so always keep an eye on the temperature
and
> exposure time.
> The term "Wedge" refers to the action of prying the chip away from
the
> board.
>
> Wedge the blade so that it applies a force that will pop the device
away
> from the circuit board once the solder is no longer firmly holding
the pins
> down. This can be done on one side (right or left) of the chip if
it only
> has two sides (like the MCU used in the ATS3B). I
> <http://www.flickr.com/photos/lotts-family/2899887785/in/

set-721576019746744
> 41/> sweep the air over the pins on both sides but focus mostly on
the side
> that I am wedging. That way the other side is nearly ready to go
when the
> first side gives. It happens real fast if you have wicked the
solder to
> begin with. Quad sided devices (none on the ATS3B) don't give up
one side..
> its all or nothing. I would still pry at a corner while sweeping
the hot
> air all around the pins if I had a single
> <http://www.flickr.com/photos/lotts-family/2898796106/in/
set-721576019746744
> 41/> jet nozzle. I have special nozzles for my hot air rework
> <http://www.flickr.com/photos/lotts-family/2898777750> station that
> actually shoot
> <http://www.flickr.com/photos/lotts-family/2900670030/in/
set-721576019746744
> 41/> air on all pins at the same time without heating the chip for
that
> occasion.
>
> Ken Lotts
>
> AA7JC
>
>
>
> From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com]
On Behalf
> Of qwasty
> Sent: Friday, November 07, 2008 10:50 AM
> To: AT_Sprint@yahoogroups.com
> Subject: [AT_Sprint] Re: Butane Soldering Iron For SMT SMD work
>
>
>
> What do you mean by "wedging"?
>
> --- In AT_Sprint@yahoogroups.com <mailto:AT_Sprint
%40yahoogroups.com> , "ken
> Lotts \(at home\)" <ken@>
> wrote:
> >
> > If you wick all the joints as clean as possible, the hot air
> portion of the
> > job will be reduced to just a few seconds and thereby reduce
> possible
> > component damage.

> > I use an Exacto knife to apply some wedging while I blow the hot
> air.
> >
> > Ken
> >
> >
> >
> > From: AT_Sprint@yahoogroups.com <mailto:AT_Sprint
%40yahoogroups.com>
> [mailto:AT_Sprint@yahoogroups.com <mailto:AT_Sprint
%40yahoogroups.com>]
> On Behalf
> > Of kc7fys
> > Sent: Thursday, November 06, 2008 10:03 PM
> > To: AT_Sprint@yahoogroups.com <mailto:AT_Sprint
%40yahoogroups.com>
> > Subject: [AT_Sprint] Re: Butane Soldering Iron For SMT SMD work
> >
> >
> >
> > My experience with blowing heat is with a Hobby Lobby embossing
tool
> > (12$). My soldering turned out well, and removing/reinstalling
the
> MPU
> > was a 40 second job, literally. Hold it with tweezers and it just
> > lifts out. My only warning is overheating--I made a little
focussing
> > nozzle from a small kitchen funnel with a 1cm diameter opening. It
> > worked well, but the heat was proportionally more intense. I
> actually
> > saw the surface of the PCB blister up, much to my horror as I
> quickly
> > flicked the tool away. It caused no damage to the radio, but
scared
> > me. Hot air soldering is really fast and easy, but overheating is
> one
> > concern.
> > Jonathan KC7FYS
> >
>

3780. RE: [AT_Sprint] Re: Butane Soldering Iron For SMT SMD work

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-07 19:58:54 UTC
From: ken Lotts (at home)
Topic: 3764 Message: 3780

I should have stated more clearly that I wedge the plastic body.. not the pins

From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com] On Behalf Of ken Lotts (at home)
Sent: Friday, November 07, 2008 11:22 AM
To: AT_Sprint@yahoogroups.com
Subject: RE: [AT_Sprint] Re: Butane Soldering Iron For SMT SMD work

This only applies to multi pin devices.. simple SMD parts like resistors and capacitors etc can USUALLY just be blown off with the air nozzle. The idea is not damaging the board so always keep an eye on the temperature and exposure time.
The term "Wedge" refers to the action of prying the chip away from the board.

Wedge the blade so that it applies a force that will pop the device away from the circuit board once the solder is no longer firmly holding the pins down. This can be done on one side (right or left) of the chip if it only has two sides (like the MCU used in the ATS3B). I <http://www.flickr.com/photos/lotts-family/2899887785/in/set-72157601974674441/> sweep the air over the pins on both sides but focus mostly on the side that I am wedging. That way the other side is nearly ready to go when the first side gives. It happens real fast if you have wicked the solder to begin with. Quad sided devices (none on the ATS3B) don't give up one side.. its all or nothing. I would still pry at a corner while sweeping the hot air all around the pins if I had a single <http://www.flickr.com/photos/lotts-family/2898796106/in/set-72157601974674441/> jet nozzle. I have special nozzles for my hot air rework <http://www.flickr.com/photos/lotts-family/2898777750> station that actually shoot <http://www.flickr.com/photos/lotts-family/2900670030/in/set-72157601974674441/> air on all pins at the same time without heating the chip for that occasion.

Ken Lotts

AA7JC

From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com] On Behalf Of qwasty
Sent: Friday, November 07, 2008 10:50 AM
To: AT_Sprint@yahoogroups.com
Subject: [AT_Sprint] Re: Butane Soldering Iron For SMT SMD work

What do you mean by "wedging"?

--- In AT_Sprint@yahoogroups.com <mailto:AT_Sprint%40yahoogroups.com> , "ken
Lotts \(at home\)" <ken@...>
wrote:
>
> If you wick all the joints as clean as possible, the hot air
portion of the
> job will be reduced to just a few seconds and thereby reduce
possible
> component damage.
> I use an Exacto knife to apply some wedging while I blow the hot
air.
>
> Ken
>
>
>
> From: AT_Sprint@yahoogroups.com <mailto:AT_Sprint%40yahoogroups.com>
[mailto:AT_Sprint@yahoogroups.com <mailto:AT_Sprint%40yahoogroups.com>]
On Behalf
> Of kc7fys
> Sent: Thursday, November 06, 2008 10:03 PM
> To: AT_Sprint@yahoogroups.com <mailto:AT_Sprint%40yahoogroups.com>
> Subject: [AT_Sprint] Re: Butane Soldering Iron For SMT SMD work
>
>
>
> My experience with blowing heat is with a Hobby Lobby embossing tool
> (12$). My soldering turned out well, and removing/reinstalling the
MPU
> was a 40 second job, literally. Hold it with tweezers and it just
> lifts out. My only warning is overheating--I made a little focussing
> nozzle from a small kitchen funnel with a 1cm diameter opening. It
> worked well, but the heat was proportionally more intense. I
actually
> saw the surface of the PCB blister up, much to my horror as I
quickly
> flicked the tool away. It caused no damage to the radio, but scared
> me. Hot air soldering is really fast and easy, but overheating is
one
> concern.
> Jonathan KC7FYS
>

3781. Re:[AT_Sprint] Re: Butane Soldering Iron For SMT SMD work

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-08 00:10:06 UTC
From: J. Haynes
Topic: 3764 Message: 3781

Youtube kc7fys for a before and after video of my reflow process.
Jonathan

3782. Re: [AT_Sprint] Re: Butane Soldering Iron For SMT SMD work

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-08 19:41:47 UTC
From: Bill Noyce
Topic: 3764 Message: 3782

Re: Butane soldering irons vs. torches

I may not have made it clear that used the RS butane soldering IRON, not a torch. It works just like an electric iron for the classic "one joint at a time" method. Lightly tin one pad, lay the part on with tweezers, hold it down, reheat that joint, solder other pin(s) of the part, revisit first joint as needed.

I haven't tried using the torch as a heat gun for the solder-paste method. (I have used the hot-air embosser. It is so cheap and works so well I'm not looking for an alternative.)

For unsoldering multi-pin devices, I think KD1JV suggests this trick. Thread some fine enameled wire under the pins where they angle out from the plastic package, and anchor one end (perhaps by soldering to a convenient point on the board). Apply a gentle pull to the side as you reheat the pins. The wire will sweep under each pin as it gets hot enough and separate it from the PCB. Repeat for the other row(s) of pins I did have to unsolder a part -- can't remember if it was the MCU or the DDS that I carefully soldered in backwards -- and this method worked great.

-- Bill, AB1AV.

3783. RE: [AT_Sprint] Re: Butane Soldering Iron For SMT SMD work

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-08 20:16:51 UTC
From: Ken Lotts
Topic: 3764 Message: 3783

Sure nuff.. I just tried it and found that it works great!
Thanks for sharing it.

Ken, AA7JC

-----Original Message-----
From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com]On Behalf Of Bill Noyce
Sent: Saturday, November 08, 2008 12:42 PM
To: AT_Sprint@yahoogroups.com
Subject: Re: [AT_Sprint] Re: Butane Soldering Iron For SMT SMD work

Re: Butane soldering irons vs. torches

I may not have made it clear that used the RS butane soldering IRON, not a torch. It works just like an electric iron for the classic "one joint at a time" method. Lightly tin one pad, lay the part on with tweezers, hold it down, reheat that joint, solder other pin(s) of the part, revisit first joint as needed.

I haven't tried using the torch as a heat gun for the solder-paste method. (I have used the hot-air embosser. It is so cheap and works so well I'm not looking for an alternative.)

For unsoldering multi-pin devices, I think KD1JV suggests this trick. Thread some fine enameled wire under the pins where they angle out from the plastic package, and anchor one end (perhaps by soldering to a convenient point on the board). Apply a gentle pull to the side as you reheat the pins. The wire will sweep under each pin as it gets hot enough and separate it from the PCB. Repeat for the other row(s) of pins I did have to unsolder a part -- can't remember if it was the MCU or the DDS that I carefully soldered in backwards -- and this method worked great.

-- Bill, AB1AV.

3784. Re: [AT_Sprint] Re: Butane Soldering Iron For SMT SMD work

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-08 20:17:36 UTC
From: Bill Noyce
Topic: 3764 Message: 3784

I'd rather pull to the side, rather than straight up like you show, to
prevent bending the "feet" of the pins on the other side...
-- Bill, AB1AV

On Sat, Nov 8, 2008 at 3:16 PM, Ken Lotts <ken@...> wrote:
> Sure nuff.. I just tried it and found that it works great!
> Thanks for sharing it.
>
> Ken, AA7JC
>
>
> -----Original Message-----
> From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com]On Behalf
> Of Bill Noyce
> Sent: Saturday, November 08, 2008 12:42 PM
> To: AT_Sprint@yahoogroups.com
> Subject: Re: [AT_Sprint] Re: Butane Soldering Iron For SMT SMD work
>
> Re: Butane soldering irons vs. torches
>
> I may not have made it clear that used the RS butane soldering IRON,
> not a torch. It works just like an electric iron for the classic "one
> joint at a time" method. Lightly tin one pad, lay the part on with
> tweezers, hold it down, reheat that joint, solder other pin(s) of the
> part, revisit first joint as needed.
>
> I haven't tried using the torch as a heat gun for the solder-paste
> method. (I have used the hot-air embosser. It is so cheap and works
> so well I'm not looking for an alternative.)
>
> For unsoldering multi-pin devices, I think KD1JV suggests this trick.
> Thread some fine enameled wire under the pins where they angle out
> from the plastic package, and anchor one end (perhaps by soldering to
> a convenient point on the board). Apply a gentle pull to the side as
> you reheat the pins. The wire will sweep under each pin as it gets
> hot enough and separate it from the PCB. Repeat for the other row(s)
> of pins I did have to unsolder a part -- can't remember if it was the
> MCU or the DDS that I carefully soldered in backwards -- and this
> method worked great.
>
> -- Bill, AB1AV.
>
>

3785. RE: [AT_Sprint] Re: Butane Soldering Iron For SMT SMD work

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-08 20:57:04 UTC
From: Ken Lotts
Topic: 3764 Message: 3785

OK.. Yeah.. Much better..
amazing!
Thanks again
Ken AA7JC

-----Original Message-----
From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com]On
Behalf Of Bill Noyce
Sent: Saturday, November 08, 2008 1:18 PM
To: AT_Sprint@yahoogroups.com
Subject: Re: [AT_Sprint] Re: Butane Soldering Iron For SMT SMD work

I'd rather pull to the side, rather than straight up like you show, to
prevent bending the "feet" of the pins on the other side...
-- Bill, AB1AV

On Sat, Nov 8, 2008 at 3:16 PM, Ken Lotts <ken@...> wrote:
> Sure nuff.. I just tried it and found that it works great!
> Thanks for sharing it.
>
> Ken, AA7JC
>
>
> -----Original Message-----
> From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com]On
Behalf
> Of Bill Noyce
> Sent: Saturday, November 08, 2008 12:42 PM
> To: AT_Sprint@yahoogroups.com
> Subject: Re: [AT_Sprint] Re: Butane Soldering Iron For SMT SMD work
>
> Re: Butane soldering irons vs. torches
>
> I may not have made it clear that used the RS butane soldering IRON,
> not a torch. It works just like an electric iron for the classic "one
> joint at a time" method. Lightly tin one pad, lay the part on with
> tweezers, hold it down, reheat that joint, solder other pin(s) of the
> part, revisit first joint as needed.
>
> I haven't tried using the torch as a heat gun for the solder-paste
> method. (I have used the hot-air embosser. It is so cheap and works
> so well I'm not looking for an alternative.)
>
> For unsoldering multi-pin devices, I think KD1JV suggests this trick.
> Thread some fine enameled wire under the pins where they angle out
> from the plastic package, and anchor one end (perhaps by soldering to

> a convenient point on the board). Apply a gentle pull to the side as
> you reheat the pins. The wire will sweep under each pin as it gets
> hot enough and separate it from the PCB. Repeat for the other row(s)
> of pins I did have to unsolder a part -- can't remember if it was the
> MCU or the DDS that I carefully soldered in backwards -- and this
> method worked great.
>
> -- Bill, AB1AV.
>
>

3786. ATS-3b modifications, current state of my device

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-09 00:47:25 UTC
From: Vojtěch Bubník
Topic: 3786 Message: 3786

Hi gang.

For those interested in adding new bells and whistles to the ATS-3b kit, I documented current state of my efforts. Well, schematic diagrams and firmware are missing yet. The page shows pictures of the board I presented at NJQRP meeting on September 28th.

http://www.kufr.cz/~ok1iak/HAM/ATS3b/index.php3

73, Vojtech OK1IAK

3787. RE: [AT_Sprint] ATS-3b modifications, current state of my device

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-09 01:14:43 UTC
From: Ken Lotts
Topic: 3786 Message: 3787

Wow, No doubt the bleeding edge ATS3B state of the art.
Have you considered just designing a new circuit board?

Ken Lotts
aa7jc

-----Original Message-----
From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com]On
Behalf Of Vojtich Bubnik
Sent: Saturday, November 08, 2008 5:47 PM
To: at_sprint@yahoogroups.com; njqrp@yahoogroups.com
Subject: [AT_Sprint] ATS-3b modifications, current state of my device

Hi gang.

For those interested in adding new bells and whistles to the ATS-3b kit, I
documented current state of my efforts. Well, schematic diagrams and
firmware are missing yet. The page shows pictures of the board I presented
at NJQRP meeting on September 28th.

http://www.kufr.cz/~ok1iak/HAM/ATS3b/index.php3

73, Vojtech OK1IAK

3788. RE: [AT_Sprint] ATS-3b modifications, current state of my device

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-09 01:30:12 UTC
From: Vojtěch Bubník
Topic: 3786 Message: 3788

> Have you considered just designing a new circuit board?

Sorry, Ken, I do not plan to do do that. I simply do not have time to master circuit board design. I tried it once or twice, but for most of my circuit design it is much faster to use Manhattan construction or perfo board.

I plan to publish circuit diagrams and firmware though. Anybody is free to design circuit board from it. My estimate is that you would need smaller vias and probably four layer board with ground plane in the middle to fit all the circuits on the Altoids tin format board. It is perfectly doable, only the board would be lot more expensive.

73, Vojtech

3789. Re: Butane Soldering Iron For SMT SMD work

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-10 13:01:37 UTC
From: jaakko330
Topic: 3764 Message: 3789

--- In AT_Sprint@yahoogroups.com, "qwasty" <qwasty@...> wrote:

> It sounds like a butane iron is not a good choice for a heat blower
> on a whole project, but maybe it's good enough for one or two
> components here and there? It would probably be easier to control if
> you were only doing one component, instead of trying to flow solder
> on the entire board all at once. I guess that could be generalized to
> say that no soldering iron can compete with a good heat blower for
> flowing solder on an entire board, but that they can be used for
> individual components. Does that sound about right?

I have a small field soldering iron that works with three AA cells. It works fine with through hole parts, but I did not try it with SMD components. I guess the butane iron gives more heat - I have only used torches before.

I invested to new technology and bought a new SMD hot air rework station with temperature control. It can do the classical soldering work too, though the area you are heating is a little larger than the tip of a soldering iron. You can use different sizes of nozzles to spot the heat. The hot air tool is very handy for removal of the SMD components and you can use it also with different plastics.

73, Jaakko OH7BF/F5VGL

3790. Re: [AT_Sprint] Re: Butane Soldering Iron For SMT SMD work

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-10 18:15:33 UTC
From: Full Some
Topic: 3764 Message: 3790

I have used a Portasol butane soldering pencil for the majority of my kit assemblies until buying a temp controlled unti. I used the 1 mm Portasol tip for the ATS 2 and ATS 3. Where more heat is required on the ground side, I used the next larger tip or turned up the heat. You can adjust the heat and board burning and trace lifting are almost eliminated with experience. The catalytic ports on the tip put out more than enough heat to apply shrink tubing. I recently used the Portasol to solder a number of PL-259s outside when fixing my Gap antenna - I had to use the largest Portasol tip to get enough heat.

The tips can be a little pricy.

One does have to have a ready supply of butane (I buy the inexpensive imported stuff) and extra tips (they break due to heat/metal fatigue). Also, I do not have a rest so I rest the tip over the edge of the assembly table - usually I solder 5 or six parts and then turn off the unit. The unit heats up quite quickly to soldering temperature - you get to know the right setting. If when soldering you need more heat, you just dial up more heat.

Overall, I have been pleased with the units (I have an old and new style) and have not destroyed a part or board yet. I have also used the Radio Shack unit but I only have the one tip that came with the unit.

--- On Sat, 11/8/08, Bill Noyce <WBNoyce@...> wrote:
From: Bill Noyce <WBNoyce@gmail.com>
Subject: Re: [AT_Sprint] Re: Butane Soldering Iron For SMT SMD work
To: AT_Sprint@yahoogroups.com
Date: Saturday, November 8, 2008, 7:41 PM

Re: Butane soldering irons vs. torches

I may not have made it clear that used the RS butane soldering IRON,

not a torch. It works just like an electric iron for the classic "one

joint at a time" method. Lightly tin one pad, lay the part on with

tweezers, hold it down, reheat that joint, solder other pin(s) of the

part, revisit first joint as needed.

I haven't tried using the torch as a heat gun for the solder-paste

method. (I have used the hot-air embosser. It is so cheap and works

so well I'm not looking for an alternative.)

For unsoldering multi-pin devices, I think KD1JV suggests this trick.

Thread some fine enameled wire under the pins where they angle out

from the plastic package, and anchor one end (perhaps by soldering to

a convenient point on the board). Apply a gentle pull to the side as you reheat the pins. The wire will sweep under each pin as it gets hot enough and separate it from the PCB. Repeat for the other row(s) of pins I did have to unsolder a part -- can't remember if it was the MCU or the DDS that I carefully soldered in backwards -- and this method worked great.

-- Bill, AB1AV.

3791. Wanted: KK5PY Micro Key

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-11 17:07:55 UTC
From: n3bj
Topic: 3791 Message: 3791

Anyone have one they can spare ?

Alan, N3BJ

3792. modified ATS-3b, high resolution pictures

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-13 02:45:30 UTC
From: Vojtěch Bubník
Topic: 3792 Message: 3792

Hi gang.

I updated following page with high resolution images of my extended ATS-3b. I borrowed a tiny pocket digital camera and I just wonder how far the development of CCD sensors went in 7 years since I bought my first digital camera. The new CCD chip, even if it has 4x more pixels, seems to be more sensitive than the old low resolution one. Also I am terrified how dirty my board is. It seems that trying to clean it with rubbing alcohol only dissolved the flux to let dust stick firmly.

http://www.kufr.cz/~ok1iak/HAM/ATS3b/index.php3

73, Vojtech OK1IAK

3793. Re: modified ATS-3b, high resolution pictures

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-13 06:05:00 UTC
From: qwasty
Topic: 3792 Message: 3793

What camera did you use? I'm thinking of getting a Nikon CoolPix 995 because it's capable of microscope-like shots, and it's an OLD camera available for under $60 if you shop around. Check it out:

http://www.ae5x.com/ats3_files/smt.jpg

The above photo is explained here:

http://www.ae5x.com/ats3.html

--- In AT_Sprint@yahoogroups.com, Vojtìch Bubník <bubnikv@...> wrote:
>
> Hi gang.
>
> I updated following page with high resolution images of my extended ATS-3b. I borrowed a tiny pocket digital camera and I just wonder how far the development of CCD sensors went in 7 years since I bought my first digital camera. The new CCD chip, even if it has 4x more pixels, seems to be more sensitive than the old low resolution one. Also I am terrified how dirty my board is. It seems that trying to clean it with rubbing alcohol only dissolved the flux to let dust stick firmly.
>
> http://www.kufr.cz/~ok1iak/HAM/ATS3b/index.php3
>
> 73, Vojtech OK1IAK
>

3794. Re: [AT_Sprint] Re: modified ATS-3b, high resolution pictures

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-13 12:39:32 UTC
From: Vojtěch Bubník
Topic: 3792 Message: 3794

> What camera did you use?

I borrowed Cannon PowerShot SD1000, Digital Elph. Pretty little toy with 7Mpixels and 3x optical zoom. One probably pays quite a lot for the tiny format.

> I'm thinking of getting a Nikon CoolPix 995
> because it's capable of microscope-like shots, and it's an OLD camera
> available for under $60 if you shop around. Check it out:

Thanks for the tip.

Vojtech

3795. If Obama owned an ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-13 15:57:11 UTC
From: ken Lotts (at home)
Topic: 3792 Message: 3795

I think he might want some change ;-)

Here is my working list... feel free to add to it:

First..
Important stuff that needs to stay real close to the same:
-Altoids size
-Power consumption & weight

changes =(within reason)= that I would like to see

Firmware changes..
-chirp tuning to save batteries & finals (this is only firmware)
-step size memory for scan feature (scan works best with 10hz step)
-cw speed indicator
-Enhance keying (variable parameters)
-I hate cryptic menus as much as the next guy but If embedded menu functions become an issue, make an *option* to disable or simplify them.

hardware changes:
-swr indicator (maybe that only fires up in the tune mode?)
-variable bandwidth filter (or bypass like the ats3)
-built in touch keyer circuit
-SPY bi-wire vs jtag (MSP430F2132?)

Ken Lotts
aa7jc

3796. Re: [AT_Sprint] If Obama owned an ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-13 19:43:47 UTC
From: Mark Brueggemann
Topic: 3792 Message: 3796

--- "ken Lotts (at home)" <ken@...> wrote:

> Here is my working list... feel free to add to it:

4 layer board.
SWR insensitive/more robust PA.

Mark K5LXP
Albuquerque, NM

3797. ATS3 and QBSA

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-13 21:41:00 UTC
From: WA0ITP
Topic: 3797 Message: 3797

Has anyone combined an ATS3 and a QBSA in the same enclosure?

I love this radio stuff !
72, 73 Terry, WA?ITP
www.wa0dx.org/wa0itp
www.4sqrp.com
www.hams4u.com
www.qrpspots.com

3798. RE: [AT_Sprint] ATS3 and QBSA

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-13 21:59:32 UTC
From: Dohn
Topic: 3797 Message: 3798

I have wondered the same thing. I was thinking that there may be a section
of the QBSA that would interfere with the AT rig. I have them both too. It
would be convenient to say the least.
Is there anything stopping you from incorporating say an ☐Island II Keyer☐?
If it is feasible, how would you configure the AT rig to allow it to use
that keyer?
Dohn Smythe
N8EWY

From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com] On Behalf
Of WA0ITP
Sent: Thursday, November 13, 2008 4:41 PM
To: AT_Sprint@yahoogroups.com
Subject: [AT_Sprint] ATS3 and QBSA

Has anyone combined an ATS3 and a QBSA in the same enclosure?

I love this radio stuff !
72, 73 Terry, WAØITP
www.wa0dx.org/wa0itp
www.4sqrp.com
www.hams4u.com
www.qrpspots.com

3799. RE: [AT_Sprint] ATS3 and QBSA

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-13 22:28:33 UTC
From: Dohn
Topic: 3797 Message: 3799

In fact, I☐ll take that little rig if it☐s still available.
73☐s,

Dohn N8EWY

From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com] On Behalf Of WA0ITP
Sent: Thursday, November 13, 2008 4:41 PM
To: AT_Sprint@yahoogroups.com
Subject: [AT_Sprint] ATS3 and QBSA

Has anyone combined an ATS3 and a QBSA in the same enclosure?

I love this radio stuff !
72, 73 Terry, WA0ITP
www.wa0dx.org/wa0itp
www.4sqrp.com
www.hams4u.com
www.qrpspots.com

3800. RE: [AT_Sprint] ATS3 and QBSA

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-14 00:47:44 UTC
From: Dale Putnam
Topic: 3797 Message: 3800

Am toying with the idea... or a matched pair of boxes...
I found a pair of very small craftsman tool boxes that might work...
just thinking about it...
--... ...-- Dale - WC7S in Wy

To: AT_Sprint@yahoogroups.comFrom: wa0itp@...: Thu, 13 Nov 2008 15:41:00 -0600Subject: [AT_Sprint] ATS3 and QBSA

Has anyone combined an ATS3 and a QBSA in the same enclosure?----------I love this radio stuff !72, 73 Terry, WAØITPwww.wa0dx.org/wa0itpwww.4sqrp.comwww.hams4u.comwww.qrpspots.com

_____
See how Windows® connects the people, information, and fun that are part of your life
http://clk.atdmt.com/MRT/go/119463819/direct/01/

3801. Re: [AT_Sprint] If Obama owned an ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-14 03:57:01 UTC
From: Hank Greeb
Topic: 3792 Message: 3801

I think there are mods to make the more robust PA. See the PFR-3 for details.

Hg

Mark Brueggemann wrote:
> --- "ken Lotts (at home)" <ken@...> wrote:
>
>
>
>> Here is my working list... feel free to add to it:
>>
>
> 4 layer board.
> SWR insensitive/more robust PA.
>
>
>
> Mark K5LXP
> Albuquerque, NM

3802. Re: ATS3 and QBSA

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-14 05:39:45 UTC
From: Tim Keene
Topic: 3797 Message: 3802

Yup, check the photos section under my call...K5DEZ
It may not be perfect and pretty but it works for me. I used 3 so-239's for my convenience and to make the QBSA for versatile to use with other rigs.
Tim

--- In AT_Sprint@yahoogroups.com, "WA0ITP" <wa0itp@...> wrote:
>
> Has anyone combined an ATS3 and a QBSA in the same enclosure?
>
> ----------
> I love this radio stuff !
> 72, 73 Terry, WAØITP
> www.wa0dx.org/wa0itp
> www.4sqrp.com
> www.hams4u.com
> www.qrpspots.com
>

3803. Re: Butane Soldering Iron For SMT SMD work

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-14 06:44:06 UTC
From: qwasty
Topic: 3764 Message: 3803

That's interesting. Did you ever try using the heat blower on SMT SMD's?

--- In AT_Sprint@yahoogroups.com, Full Some <full.some@...> wrote:
>
> I have used a Portasol butane soldering pencil for the majority of my kit assemblies until buying a temp controlled unti. I used the 1 mm Portasol tip for the ATS 2 and ATS 3. Where more heat is required on the ground side, I used the next larger tip or turned up the heat. You can adjust the heat and board burning and trace lifting are almost eliminated with experience. The catalytic ports on the tip put out more than enough heat to apply shrink tubing. I recently used the Portasol to solder a number of PL-259s outside when fixing my Gap antenna - I had to use the largest Portasol tip to get enough heat.
>
> The tips can be a little pricy.
>
> One does have to have a ready supply of butane (I buy the inexpensive imported stuff) and extra tips (they break due to heat/ metal fatigue). Also, I do not have a rest so I rest the tip over the edge of the assembly table - usually I solder 5 or six parts and then turn off the unit. The unit heats up quite quickly to soldering temperature - you get to know the right setting. If when soldering you need more heat, you just dial up more heat.
>
> Overall, I have been pleased with the units (I have an old and new style) and have not destroyed a part or board yet. I have also used the Radio Shack unit but I only have the one tip that came with the unit.
>
>
>
> --- On Sat, 11/8/08, Bill Noyce <WBNoyce@...> wrote:
> From: Bill Noyce <WBNoyce@...>
> Subject: Re: [AT_Sprint] Re: Butane Soldering Iron For SMT SMD work
> To: AT_Sprint@yahoogroups.com
> Date: Saturday, November 8, 2008, 7:41 PM
>
>
>
>
>
>
>
>

>
>
>
>
> Re: Butane soldering irons vs. torches
>
>
>
> I may not have made it clear that used the RS butane soldering IRON,
>
> not a torch. It works just like an electric iron for the classic
"one
>
> joint at a time" method. Lightly tin one pad, lay the part on with
>
> tweezers, hold it down, reheat that joint, solder other pin(s) of
the
>
> part, revisit first joint as needed.
>
>
>
> I haven't tried using the torch as a heat gun for the solder-paste
>
> method. (I have used the hot-air embosser. It is so cheap and
works
>
> so well I'm not looking for an alternative.)
>
>
>
> For unsoldering multi-pin devices, I think KD1JV suggests this
trick.
>
> Thread some fine enameled wire under the pins where they angle out
>
> from the plastic package, and anchor one end (perhaps by soldering
to
>
> a convenient point on the board). Apply a gentle pull to the side
as
>
> you reheat the pins. The wire will sweep under each pin as it gets
>
> hot enough and separate it from the PCB. Repeat for the other row
(s)
>
> of pins I did have to unsolder a part -- can't remember if it was
the
>

> MCU or the DDS that I carefully soldered in backwards -- and this
>
> method worked great.
>
>
>
> -- Bill, AB1AV.
>

3804. Re: [AT_Sprint] If Obama owned an ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-14 13:20:21 UTC
From: Vojtěch Bubník
Topic: 3792 Message: 3804

Hi Ken.

> -chirp tuning to save batteries & finals (this is only firmware)

This is a simple one. Actually in OK land I was told one shall send Vs during antenna tuning.

> -cw speed indicator

Would you be more specific?

> -Enhance keying (variable parameters)

What do you want to configure? I think one shall send a perfectly timed morse code to be understood well, which is of high importance with QRP levels. I understand parameters like dash/dot ratio settnings to be useful for transmitter chains, where the mark is shortened by RX/TX relay. But with solid state BK there is IMHO no need for such settings.

What I find useful (and there is still space in FLASH) is to add AccuKeyer auto space feature and a mode simulating single lever paddle with iambic paddle. I will try to do that with "my" firmware.

> -I hate cryptic menus as much as the next guy but If embedded menu functions
> become an issue, make an *option* to disable or simplify them.

Would you please explain that? I am working on "my" firmware right now, so any idea will be appreciated.

> -swr indicator (maybe that only fires up in the tune mode?)

Well, a SWR bridge will take considerable space in the Altoids box. Otherwise it would not be difficult if you have two controller pins with A/D function available. Finally I decided NOT to put it into my device mostly because of space constraints, but also because of controller pins available (and because I am using Elecraft T1, which has SWR bridge built in). Anyway, if you want to do it, go ahead with the display driver mod, for illustration see the pictures, here is the link again. The firmware change to send to shift register instead of directly to display is not difficult.

http://www.kufr.cz/~ok1iak/HAM/ATS3b/index.php3

> -variable bandwidth filter (or bypass like the ats3)

My solution with D/A converter, Op Amp and 2 transistors to create weak current voltage source from 0 to full battery voltage to control varactors in IF filter is probably overkill for such a tiny radio. Elecraft is on purpose powering the whole digital part in K1 with 6V, which will open the IF filter up to 800Hz. My solution will open the filter wider with higher battery voltage. Elecraft KX1 tunes IF filter with analog pot sourced from 6 volts. The maximum catalog bandwidth of KX1 is 2kHz, which is IMO wider than K1 only

because KX1 has less selective IF (3 crystals instead of 4).

If you want to go simple, I would recommend to go to http://www.danssmallpartsandkits.net/ and buy three of MVAM109. Quite pricey though. Replace the three shunt capacitors in IF filter with the varactors. Build a tiny SPDT switch into the box, must really throw before make. Switch between full battery voltage after the hot carrier diode and 3.5V stabilized voltage, use that to bias the varactors. You will get a switchable bandwidth between about 300Hz and 1.5kHz. The filter shape at 1.5kHz will not be pretty though.

If you are willing to buy from oversees, try ordering 3KB313 at
http://www.elektronika.cz/inshop/scripts/set.asp?Level=420
These are the parts I am using in my ATS-3b. You may send a request to info@... .
The parts are surplus from cold war era. Three paired varactors are sold for about 60 cents without packing and shipping. Maybe a group buy would be worth, before they sell out.

> -built in touch keyer circuit

Buy two of QT113, DigiKey #427-1138-1-ND. Glue it to the top side of the ATS-3b board, wire it according to the datasheet. It seems Quantum Research was bought by Atmel.

> -SPY bi-wire vs jtag (MSP430F2132?)

What will be the benefit?

Mark K5LXP wrote:

> 4 layer board.

This is a means not requirement on its own. 4 layer board is more expensive and it is also harder to trace if something goes wrong. I would go with 4 layer board only if necessary.

Hank Greeb wrote:

> I think there are mods to make the more robust PA. See the PFR-3 for details.

I looked at the PFR-3 schematic and there is no essential difference between ATS-3b and PFR-3 PA. The FETs in ATS-3b are 2n7000, in PFR-3 BS170, which are slightly more robust, but essentially very much equivalent transistors.

I compared the ATS-3b/PFR-3 PA design with NorCal 2030. NorCal 2030 has overvoltage protection by measuring the peak voltage and closing PA driver. ATS-b3 just dumpens the spikes with 47V Zener diode. NorCal 2030 measures PA current and if it is too high, it limits PA driver. ATS-3b over current protection resets CPU, which may be annoying, but it has two reasons.

1) There is no controller pin available for over current protection sense in ATS-3b.
2) If controller goes havoc and leaves DDS pin16 low and MSP430 pin 24 high, the three 2n7000s in PA will burn in couple of seconds. I believe it happened to me with ATS-3a once during firmware debugging.

Actually this danger would be mitigated by putting 100nF cap between PA gates and driver as done in NorCal 2030 or Steve's special PSK31 transmitter.

I released controller P3 pins by using shift register to drive the display. Now I am using port 3 for following pins.

1 pin for shift register clock
2 pins for rotary encoder
2 pins for I2C bus (SDA, SCL)
1 pin to switch AF filters (CW/SSB)

I still have two pins left for other purposes. I will most probably use them for current sensing and peak RF sensing or PA voltage sensing or PA temperature sensing. Not exactly RF bridge, but it will allow one to calculate PA input power and will allow experimenting with more reasonable PA over current algorithms.

73, Vojtech OK1IAK

3805. Re: [AT_Sprint] Re: ATS3 and QBSA

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-14 14:27:07 UTC
From: WA0ITP
Topic: 3797 Message: 3805

Thanx Tim,

Looks good, appreciate the note. K1YHR, is going to combine them and got me thinking about it also. I'm just looking looking for ideas at this point..

Thanx again.

I love this radio stuff !
72, 73 Terry, WA?ITP
www.wa0dx.org/wa0itp
www.4sqrp.com
www.hams4u.com
www.qrpspots.com

----- Original Message -----
From: "Tim Keene" <K5DEZ@...>
To: <AT_Sprint@yahoogroups.com>
Sent: Thursday, November 13, 2008 11:39 PM
Subject: [AT_Sprint] Re: ATS3 and QBSA

Yup, check the photos section under my call...K5DEZ
It may not be perfect and pretty but it works for me. I used 3 so-239's for my convenience and to make the QBSA for versatile to use with other rigs.
Tim

--- In AT_Sprint@yahoogroups.com, "WA0ITP" <wa0itp@...> wrote:
>
> Has anyone combined an ATS3 and a QBSA in the same enclosure?
>
> ---
> I love this radio stuff !
> 72, 73 Terry, WA?ITP
> www.wa0dx.org/wa0itp
> www.4sqrp.com
> www.hams4u.com
> www.qrpspots.com
>

Yahoo! Groups Links

No virus found in this incoming message.
Checked by AVG - http://www.avg.com

Version: 8.0.175 / Virus Database: 270.9.2/1785 - Release Date: 11/13/2008 9:12 AM

3806. Re: [AT_Sprint] Re: ATS3 and QBSA

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-14 10:40:03 UTC
From: John L. Sielke
Topic: 3797 Message: 3806

At 02:27 PM 11/14/2008, you wrote:
>Thanx Tim,
>
>Looks good, appreciate the note. K1YHR, is going to combine them and got me
>thinking about it also. I'm just looking looking for ideas at this point..
>
>Thanx again.
>----------
>I love this radio stuff !
>72, 73 Terry, WAØITP
>www.wa0dx.org/wa0itp
>www.4sqrp.com
>www.hams4u.com
>www.qrpspots.com
>
>Tim

I think I loaded photos to the web site, but if not, here is the link:

http://home.comcast.net/~w2agn/kitchensink.html

To a ATS-3B/QBSA/NESCAF rig I built into a
Pelican box for waterproofing to use on my boat.

+-+-+-+-+-+ w2agn@...
|W|2|A|G|N| Celebrating 50 years
+-+-+-+-+-+ of Amateur Radio
1958-2008 http://w2agn.net
-.- ...-- .... .-.. ..-

3807. Re: [AT_Sprint] Re: ATS3 and QBSA

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-14 16:00:53 UTC
From: WA0ITP
Topic: 3797 Message: 3807

Outstanding John! Thanx very much for the link.

I love this radio stuff !
72, 73 Terry, WA?ITP
www.wa0dx.org/wa0itp
www.4sqrp.com
www.hams4u.com
www.qrpspots.com

----- Original Message -----
From: "John L. Sielke" <w2agn@...>
To: <AT_Sprint@yahoogroups.com>
Sent: Friday, November 14, 2008 4:40 AM
Subject: Re: [AT_Sprint] Re: ATS3 and QBSA

At 02:27 PM 11/14/2008, you wrote:
>Thanx Tim,
>
>Looks good, appreciate the note. K1YHR, is going to combine them and got me
>thinking about it also. I'm just looking looking for ideas at this point..
>
>Thanx again.
>---
>I love this radio stuff !
>72, 73 Terry, WA?ITP
>www.wa0dx.org/wa0itp
>www.4sqrp.com
>www.hams4u.com
>www.qrpspots.com
>
>Tim

I think I loaded photos to the web site, but if not, here is the link:

http://home.comcast.net/~w2agn/kitchensink.html

To a ATS-3B/QBSA/NESCAF rig I built into a
Pelican box for waterproofing to use on my boat.

+-+-+-+-+-+ w2agn@...
|W|2|A|G|N| Celebrating 50 years
+-+-+-+-+-+ of Amateur Radio
1958-2008 http://w2agn.net
-.- ...-- .... .-.. ..-

Yahoo! Groups Links

No virus found in this incoming message.
Checked by AVG - http://www.avg.com
Version: 8.0.175 / Virus Database: 270.9.3/1787 - Release Date: 11/14/2008 8:32 AM

3808. RE: [AT_Sprint] If Obama owned an ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-14 18:26:58 UTC
From: Ken Lotts (at home)
Topic: 3792 Message: 3808

Vojtech,

Thanks for the reply!

I have only a few minutes so I can only do a partial reply right now..

Ø This is a simple one. Actually in OK land I was told one shall send Vs during antenna tuning.

I am thinking that in reality, there are times when everyone resorts to a low power dead key as they struggle with difficult tuning situations in a field environment (and does a station ID at the end of course). The ATS3 even has a dead key tune position in its menu. There is no power adjustment so it is either full power or nothing.. given the choice of a full power dead key or a full power low duty cycle rapid pulse, I would choose the later every time (its easier on the finals and the battery). I would not eliminate the dead key feature, I would just add another choice..

I have an MFJ device that does this at 75WPM, 13% duty cycle and I find it to be wonderful.. That is why I would like to see this as an option in the ATS3X rigs..

I have never looked at and measured the pulses on a scope.. maybe I will get things set up if you are interested.

Ken AA7JC

Sierra Vista, AZ

From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com] On Behalf Of Vojtech Bubník
Sent: Friday, November 14, 2008 6:20 AM
To: AT_Sprint@yahoogroups.com
Subject: Re: [AT_Sprint] If Obama owned an ATS3B

Hi Ken.

> -chirp tuning to save batteries & finals (this is only firmware)

This is a simple one. Actually in OK land I was told one shall send Vs during antenna tuning.

> -cw speed indicator

Would you be more specific?

> -Enhance keying (variable parameters)

What do you want to configure? I think one shall send a perfectly timed morse code to be understood well, which is of high importance with QRP levels. I understand parameters like dash/dot ratio settnings to be useful for transmitter chains, where the mark is shortened by RX/TX relay. But with solid state BK there is IMHO no need for such settings.

What I find useful (and there is still space in FLASH) is to add AccuKeyer auto space feature and a mode simulating single lever paddle with iambic paddle. I will try to do that with "my" firmware.

> -I hate cryptic menus as much as the next guy but If embedded menu functions
> become an issue, make an *option* to disable or simplify them.

Would you please explain that? I am working on "my" firmware right now, so any idea will be appreciated.

> -swr indicator (maybe that only fires up in the tune mode?)

Well, a SWR bridge will take considerable space in the Altoids box. Otherwise it would not be difficult if you have two controller pins with A/D function available. Finally I decided NOT to put it into my device mostly because of space constraints, but also because of controller pins available (and because I am using Elecraft T1, which has SWR bridge built in). Anyway, if you want to do it, go ahead with the display driver mod, for illustration see the pictures, here is the link again. The firmware change to send to shift register instead of directly to display is not difficult.

http://www.kufr.cz/~ok1iak/HAM/ATS3b/index.php3

> -variable bandwidth filter (or bypass like the ats3)

My solution with D/A converter, Op Amp and 2 transistors to create weak current voltage source from 0 to full battery voltage to control varactors in IF filter is probably overkill for such a tiny radio. Elecraft is on purpose powering the whole digital part in K1 with 6V, which will open the IF filter up to 800Hz. My solution will open the filter wider with higher battery voltage. Elecraft KX1 tunes IF filter with analog pot sourced from 6 volts. The maximum catalog bandwidth of KX1 is 2kHz, which is IMO wider than K1 only because KX1 has less selective IF (3 crystals instead of 4).

If you want to go simple, I would recommend to go to http://www.danssmallpartsandkits.net/ and buy three of MVAM109. Quite pricey though. Replace the three shunt capacitors in IF filter with the varactors. Build a tiny SPDT switch into the box, must really throw before make. Switch between full battery voltage after the hot carrier diode and 3.5V stabilized voltage, use that to bias the varactors. You will get a switchable bandwidth between about 300Hz and 1.5kHz. The filter shape at 1.5kHz will not be pretty though.

If you are willing to buy from oversees, try ordering 3KB313 at http://www.elektronika.cz/inshop/scripts/set.asp?Level=420
These are the parts I am using in my ATS-3b. You may send a request to info@... <mailto:info%40fanda.cz> .

The parts are surplus from cold war era. Three paired varactors are sold for about 60 cents without packing and shipping. Maybe a group buy would be worth, before they sell out.

> -built in touch keyer circuit

Buy two of QT113, DigiKey #427-1138-1-ND. Glue it to the top side of the ATS-3b board, wire it according to the datasheet. It seems Quantum Research was bought by Atmel.

> -SPY bi-wire vs jtag (MSP430F2132?)

What will be the benefit?

Mark K5LXP wrote:

> 4 layer board.

This is a means not requirement on its own. 4 layer board is more expensive and it is also harder to trace if something goes wrong. I would go with 4 layer board only if necessary.

Hank Greeb wrote:

> I think there are mods to make the more robust PA. See the PFR-3 for details.

I looked at the PFR-3 schematic and there is no essential difference between ATS-3b and PFR-3 PA. The FETs in ATS-3b are 2n7000, in PFR-3 BS170, which are slightly more robust, but essentially very much equivalent transistors.

I compared the ATS-3b/PFR-3 PA design with NorCal 2030. NorCal 2030 has overvoltage protection by measuring the peak voltage and closing PA driver. ATS-b3 just dumpens the spikes with 47V Zener diode. NorCal 2030 measures PA current and if it is too high, it limits PA driver. ATS-3b over current protection resets CPU, which may be annoying, but it has two reasons.

1) There is no controller pin available for over current protection sense in ATS-3b.
2) If controller goes havoc and leaves DDS pin16 low and MSP430 pin 24 high, the three 2n7000s in PA will burn in couple of seconds. I believe it happened to me with ATS-3a once during firmware debugging.

Actually this danger would be mitigated by putting 100nF cap between PA gates and driver as done in NorCal 2030 or Steve's special PSK31 transmitter.

I released controller P3 pins by using shift register to drive the display. Now I am using port 3 for following pins.

1 pin for shift register clock
2 pins for rotary encoder

2 pins for I2C bus (SDA, SCL)
1 pin to switch AF filters (CW/SSB)

I still have two pins left for other purposes. I will most probably use them for current sensing and peak RF sensing or PA voltage sensing or PA temperature sensing. Not exactly RF bridge, but it will allow one to calculate PA input power and will allow experimenting with more reasonable PA over current algorithms.

73, Vojtech OK1IAK

3809. Re: [AT_Sprint] Re: ATS3 and QBSA

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-14 18:29:21 UTC
From: Lee Mairs (SAG)
Topic: 3797 Message: 3809

Hi John -
Vy neat project. My ATS-3 just sits on the shelf with the rest of my QRP projects. I've got about 7 transiceiver kits waiting for me to get off my dead ass, clean the electronics shop, and get going again. I even bought the SMT tool you told me about a year or so ago. Never even taken out of the box.
73 de Lee
KM4YY/8
NNN0IOF
NNN0GCD

John L. Sielke wrote:

At 02:27 PM 11/14/2008, you wrote:

Thanx Tim,

Looks good, appreciate the note. K1YHR, is going to combine them and got me thinking about it also. I'm just looking looking for ideas at this point..

Thanx again.

I love this radio stuff !
72, 73 Terry, WAØITP
www.wa0dx.org/wa0itp (http://www.wa0dx.org/wa0itp)
www.4sqrp.com (http://www.4sqrp.com)
www.hams4u.com (http://www.hams4u.com)
www.qrpspots.com (http://www.qrpspots.com)

Tim

I think I loaded photos to the web site, but if not, here is the link:

http://home.comcast.net/~w2agn/kitchensink.html

To a ATS-3B/QBSA/NESCAF rig I built into a
Pelican box for waterproofing to use on my boat.

+-+-+-+-+-+ w2agn@...
|W|2|A|G|N| Celebrating 50 years
+-+-+-+-+-+ of Amateur Radio
1958-2008 http://w2agn.net
-.- ...-- .... .-.. ..-

Yahoo! Groups Links

<*> To visit your group on the web, go to:
http://groups.yahoo.com/group/AT_Sprint/

<*> Your email settings:
Individual Email | Traditional

<*> To change settings online go to:
http://groups.yahoo.com/group/AT_Sprint/join
(Yahoo! ID required)

<*> To change settings via email:
mailto:AT_Sprint-digest@yahoogroups.com
mailto:AT_Sprint-fullfeatured@yahoogroups.com

<*> To unsubscribe from this group, send an email to:
AT_Sprint-unsubscribe@yahoogroups.com

<*> Your use of Yahoo! Groups is subject to:
http://docs.yahoo.com/info/terms/

3810. RE: [AT_Sprint] If Obama owned an ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-14 20:09:11 UTC
From: Ken Lotts (at home)
Topic: 3792 Message: 3810

Vojtech,

Lunch hour is here so I am responding to another of your questions..

>> -I hate cryptic menus as much as the next guy but If embedded menu functions become an issue, make an *option* to disable or simplify them.

Ø Would you please explain that? I am working on "my" firmware right now, so any idea will be appreciated.

The menus...

This whole topic has merit only after you pack too many user configurable options in the menu system.. Right now, maybe the menus are not so bad, but if much were to be added, then this could be a big deal. The MSP430 can do a lot especially if the next version moves to one with more room..

I have not really come up with an exact menu configuration but I can explain the concept of what I was thinking.

Look at most any computer program that has drop down menus.. The drop down selections can be abbreviated unless they are needed.. that is the concept. Just like the VFO toggles from A to B (in W1MT firmware), you could toggle menus from simple to advanced (with adequate feedback),

Ideally a user could custom configure the firmware to clump certain commands into either category (more options HI)

In a Morse menu system, divide and conquer can be a good starting point..

One of my commercial devices does this by having an inquiry and a command mode. Basically, in that device, to trigger the inquiry mode, you simultaneously press two buttons and it responds with a question mark. You answer the question mark with a single letter response.. For example, the letter "S" would tell the device that you would like to know the current morse speed setting. In that world, you actually communicate with the device rather than marching through a menu. You enter the command mode and give it single letter and parameter instructions, you enter the inquire mode and ask it single letter questions...

Ken AA7JC
Sierra Vista, AZ

From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com] On Behalf Of Ken Lotts (at home)
Sent: Friday, November 14, 2008 11:27 AM
To: AT_Sprint@yahoogroups.com
Subject: RE: [AT_Sprint] If Obama owned an ATS3B

Vojtech,

Thanks for the reply!

I have only a few minutes so I can only do a partial reply right now..

Ø This is a simple one. Actually in OK land I was told one shall send Vs during antenna tuning.

I am thinking that in reality, there are times when everyone resorts to a low power dead key as they struggle with difficult tuning situations in a field environment (and does a station ID at the end of course). The ATS3 even has a dead key tune position in its menu. There is no power adjustment so it is either full power or nothing.. given the choice of a full power dead key or a full power low duty cycle rapid pulse, I would choose the later every time (its easier on the finals and the battery). I would not eliminate the dead key feature, I would just add another choice..

I have an MFJ device that does this at 75WPM, 13% duty cycle and I find it to be wonderful.. That is why I would like to see this as an option in the ATS3X rigs..

I have never looked at and measured the pulses on a scope.. maybe I will get things set up if you are interested.

Ken AA7JC

Sierra Vista, AZ

From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com] On Behalf Of Vojtech Bubník
Sent: Friday, November 14, 2008 6:20 AM
To: AT_Sprint@yahoogroups.com
Subject: Re: [AT_Sprint] If Obama owned an ATS3B

Hi Ken.

> -chirp tuning to save batteries & finals (this is only firmware)

This is a simple one. Actually in OK land I was told one shall send Vs during antenna tuning.

> -cw speed indicator

Would you be more specific?

> -Enhance keying (variable parameters)

What do you want to configure? I think one shall send a perfectly timed morse code to be understood well, which is of high importance with QRP levels. I understand parameters like dash/dot ratio settnings to be useful for transmitter chains, where the mark is shortened by RX/TX relay. But with solid state BK there is IMHO no need for such settings.

What I find useful (and there is still space in FLASH) is to add AccuKeyer auto space feature and a mode simulating single lever paddle with iambic paddle. I will try to do that with "my" firmware.

> -I hate cryptic menus as much as the next guy but If embedded menu functions
> become an issue, make an *option* to disable or simplify them.

Would you please explain that? I am working on "my" firmware right now, so any idea will be appreciated.

> -swr indicator (maybe that only fires up in the tune mode?)

Well, a SWR bridge will take considerable space in the Altoids box. Otherwise it would not be difficult if you have two controller pins with A/D function available. Finally I decided NOT to put it into my device mostly because of space constraints, but also because of controller pins available (and because I am using Elecraft T1, which has SWR bridge built in). Anyway, if you want to do it, go ahead with the display driver mod, for illustration see the pictures, here is the link again. The firmware change to send to shift register instead of directly to display is not difficult.

http://www.kufr.cz/~ok1iak/HAM/ATS3b/index.php3

> -variable bandwidth filter (or bypass like the ats3)

My solution with D/A converter, Op Amp and 2 transistors to create weak current voltage source from 0 to full battery voltage to control varactors in IF filter is probably overkill for such a tiny radio. Elecraft is on purpose powering the whole digital part in K1 with 6V, which will open the IF filter up to 800Hz. My solution will open the filter wider with higher battery voltage. Elecraft KX1 tunes IF filter with analog pot sourced from 6 volts. The maximum catalog bandwidth of KX1 is 2kHz, which is IMO wider than K1 only because KX1 has less selective IF (3 crystals instead of 4).

If you want to go simple, I would recommend to go to http://www.danssmallpartsandkits.net/ and buy three of MVAM109. Quite pricey though. Replace the three shunt capacitors in IF filter with the varactors. Build a tiny SPDT switch into the box, must really throw before make. Switch between full battery voltage after the hot carrier diode and 3.5V stabilized voltage, use that to bias the varactors. You will get a switchable bandwidth between about 300Hz and 1.5kHz. The filter shape at 1.5kHz will not be pretty though.

If you are willing to buy from oversees, try ordering 3KB313 at
http://www.elektronika.cz/inshop/scripts/set.asp?Level=420
These are the parts I am using in my ATS-3b. You may send a request to info@... <mailto:info%40fanda.cz> .
The parts are surplus from cold war era. Three paired varactors are sold for about 60 cents without packing and shipping. Maybe a group buy would be worth, before they sell out.

> -built in touch keyer circuit

Buy two of QT113, DigiKey #427-1138-1-ND. Glue it to the top side of the ATS-3b board, wire it according to the datasheet. It seems Quantum Research was bought by Atmel.

> -SPY bi-wire vs jtag (MSP430F2132?)

What will be the benefit?

Mark K5LXP wrote:

> 4 layer board.

This is a means not requirement on its own. 4 layer board is more expensive and it is also harder to trace if something goes wrong. I would go with 4 layer board only if necessary.

Hank Greeb wrote:

> I think there are mods to make the more robust PA. See the PFR-3 for details.

I looked at the PFR-3 schematic and there is no essential difference between ATS-3b and PFR-3 PA. The FETs in ATS-3b are 2n7000, in PFR-3 BS170, which are slightly more robust, but essentially very much equivalent transistors.

I compared the ATS-3b/PFR-3 PA design with NorCal 2030. NorCal 2030 has overvoltage protection by measuring the peak voltage and closing PA driver. ATS-b3 just dumpens the spikes with 47V Zener diode. NorCal 2030 measures PA current and if it is too high, it limits PA driver. ATS-3b over current protection resets CPU, which may be annoying, but it has two reasons.

1) There is no controller pin available for over current protection sense in ATS-3b.
2) If controller goes havoc and leaves DDS pin16 low and MSP430 pin 24 high, the three 2n7000s in PA will burn in couple of seconds. I believe it happened to me with ATS-3a once during firmware debugging.

Actually this danger would be mitigated by putting 100nF cap between PA gates and driver as done in NorCal 2030 or Steve's special PSK31 transmitter.

I released controller P3 pins by using shift register to drive the display. Now I am using port 3 for following pins.

1 pin for shift register clock
2 pins for rotary encoder
2 pins for I2C bus (SDA, SCL)
1 pin to switch AF filters (CW/SSB)

I still have two pins left for other purposes. I will most probably use them for current sensing and peak RF sensing or PA voltage sensing or PA temperature sensing. Not exactly RF bridge, but it will allow one to calculate PA input power and will allow experimenting with more reasonable

PA over current algorithms.

73, Vojtech OK1IAK

3811. Pocketdigi PDA recommendation

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-14 22:40:20 UTC
From: zevkroz
Topic: 3811 Message: 3811

I am looking for a PDA to run Pocketdigi with my ATS3B. Can anyone recommend a good (inexpensive) PDA with the features I need to run this program? Thanks. Steve, K2ZPF

3812. RE: [AT_Sprint] If Obama owned an ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-14 23:28:48 UTC
From: Michael Harnage
Topic: 3792 Message: 3812

I believe that K1EL keyers work this way. I have a K12 around here somewhere. At one point I was considering implementing this in my firmware but the code space was too tight at the time. Now that this newer chip has twice the space it may be doable... Could make the interface much more simple, although one might be definitely dependent on a cheat sheet. Might be worth revisiting...

-mike/w1mt

--- On Fri, 11/14/08, Ken Lotts (at home) <ken@lotts.net> wrote:

One of my commercial devices does this by having an inquiry and
a command mode. Basically, in that device, to trigger the inquiry mode, you
simultaneously press two buttons and it responds with a question mark. You
answer the question mark with a single letter response.. For example, the
letter "S" would tell the device that you would like to know the
current morse speed setting. In that world, you actually communicate with the
device rather than marching through a menu. You enter the command mode and
give it single letter and parameter instructions, you enter the inquire mode
and ask it single letter questions...

3813. Re: Pocketdigi PDA recommendation

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-15 00:35:58 UTC
From: Bill
Topic: 3811 Message: 3813

I really like the Jornada 720. I bought mine used for $75,
see em for 100.

Bill, ni5x.

> I am looking for a PDA to run Pocketdigi with my ATS3B. Can anyone
> recommend a good (inexpensive) PDA with the features I need to run
> this program? Thanks. Steve, K2ZPF
>

3814. Re: ATS3 and QBSA

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-15 00:40:29 UTC
From: Bill
Topic: 3797 Message: 3814

> Has anyone combined an ATS3 and a QBSA in the same enclosure?
>

I combined the ALT tuner with mine, see pics under my sign in the photos section. Or here: http://web.olp.net/bgriffin-olp/

Bill, ni5x.

3815. Re: [AT_Sprint] Re: Pocketdigi PDA recommendation

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-15 01:19:58 UTC
From: Vojtěch Bubník
Topic: 3811 Message: 3815

Hi Steve.

I have Jornada 720 too. It is a nice device. It has essentially the same hardware as iPaq 3630, only twice as big screen and 3/4 size keyboard. I bought my device with cracked display hinge for about $50. Jornada 720 runs on two LiIon cells and mine runs much longer than the iPaq 3630.

If you want to run it with ATS3B, you will need to build the slicer. It's sound output is too weak to drive paddle input directly.

73, Vojtech OK1IAK

> ------------ Původní zpráva ------------
> Od: Bill <bgriffin@olp.net>
> Předmět: [AT_Sprint] Re: Pocketdigi PDA recommendation
> Datum: 15.11.2008 01:36:07
> --
> I really like the Jornada 720. I bought mine used for $75,
> see em for 100.
>
> Bill, ni5x.
>
>
> > I am looking for a PDA to run Pocketdigi with my ATS3B. Can anyone
> > recommend a good (inexpensive) PDA with the features I need to run
> > this program? Thanks. Steve, K2ZPF
> >
>
>
>
>
>

3816. Re: ATS3 and QBSA

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-15 01:45:09 UTC
From: David Packard
Topic: 3797 Message: 3816

I have been playing with the challenge of combining my ATS-3a and QBSA in a single enclosure. I settled on the LMB Crown Royal CR-332-P (Mouser 537-CR-332). Its dimensions are 3.75 L x 3.00 W x 2.13 H. Chuck W5USJ often recommends these things. They are nice looking with the bottom painted white and the top blue. When I received the enclosure, I found that the two units did fit into it, but snugly. I thought I would mount the QBSA in the bottom with the frequency read-out on the front panel and put the ATS-3a on the bottom-side of the top of the cover, radio bottom-side (switches) up. Then I remembered the band filter modules. I would have to open the enclosure each time I wanted to change bands. Since the enclosure is buttoned up with small sheet metal screws, changing bands would be annoying. I wonder if there is something I could substitute for the screws that would perform as a quick-release fastener. I also have a Bud enclosure of somewhat larger size that has little punched out, nipple-like convexities on the sides of the top and corresponding holes on the flanges of the bottom (I got it from Mouser, but I've lost track of the stock number). This enclosure is much uglier than the Crown Royal, but the top is easily removed by squeezing the sides and lifting. I'm hesitating, because I really prefer the Crown Royal enclosure. Any suggestions would be greatly appreciated. 72, Dave K1YHR.

3817. Re:[AT_Sprint] Re: ATS3 and QBSA

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-15 01:56:30 UTC
From: J. Haynes
Topic: 3797 Message: 3817

I've seen a couple who have used a plug outside the enclosure for band modules-in the oblong Takara enclosure. That's one option.
Jonathan KC7FYS

3818. Re: [AT_Sprint] Re: Pocketdigi PDA recommendation

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-15 01:57:44 UTC
From: J. Haynes
Topic: 3811 Message: 3818

...the slicer?

3819. RE: [AT_Sprint] If Obama owned an ATS3B

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-15 02:40:20 UTC
From: Ken Lotts
Topic: 3792 Message: 3819

Vojtech,

Thanks for the cool info on the SWR bridge and filter! To be honest I was looking at much more primitive solution for both. A simple resistive bridge and a mini relay controlled from the MCU would be good enough for me and I really liked the total filter bypass that was in the older ATS3. Heck regarding space, there is room for daughter cards.. even so much that I think it might be possible (with some creative imagination) to design a set of normal 2-layer boards that would host your current highly modified ATS3X within an Altoids.

Regarding the touch circuit.. Yup! you have the right idea. This is such a popular mod that I think it at some point should just be integrated into the board.

As far as the JTAG.. I don't know.. I have had various degrees of success and failure with being able to actually run debug via the JTAG. My new FET (MSP-FET430UIF) programs via the JTAG just fine but I cant leave it connected or else the rig wont respond to the buttons or the key paddles. I really don't know that things would improve with the spy bi-wire but one thing for sure is that the footprint of the header would be a lot smaller (HI) and it would be easy to run it to the outside. The down side on that one is that it would make it less practical to field program unless you had spy bi-wire FET.

As far as the keying parameters... Well, I am not a super accomplished morse man so I wont even begin to take a stand on what should and what shouldn't be except to say that the ATS rigs focus on CW therefore the keyer functionality is at the bulls eye heart of what's really happening. I will play around with settings forever until I settle in to something that feels right. I am thinking that the more customizable the feel of the keyer the happier the owner..

You really wrote a lot of stuff.. I appreciate the all of the info. If I missed something let me know.

Thanks again

Ken AA7JC
Sierra Vista, AZ

-----Original Message-----
From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com]On Behalf Of Ken Lotts (at home)
Sent: Friday, November 14, 2008 1:09 PM
To: AT_Sprint@yahoogroups.com
Subject: RE: [AT_Sprint] If Obama owned an ATS3B

Vojtech,

Lunch hour is here so I am responding to another of your questions..

>> -I hate cryptic menus as much as the next guy but If embedded menu functions become an issue, make an *option* to disable or simplify them.

? Would you please explain that? I am working on "my" firmware right now, so any idea will be appreciated.

The menus...

This whole topic has merit only after you pack too many user configurable options in the menu system.. Right now, maybe the menus are not so bad, but if much were to be added, then this could be a big deal. The MSP430 can do a lot especially if the next version moves to one with more room..

I have not really come up with an exact menu configuration but I can explain the concept of what I was thinking.

Look at most any computer program that has drop down menus.. The drop down selections can be abbreviated unless they are needed.. that is the concept. Just like the VFO toggles from A to B (in W1MT firmware), you could toggle menus from simple to advanced (with adequate feedback),

Ideally a user could custom configure the firmware to clump certain commands into either category? (more options HI)

In a Morse menu system, divide and conquer can be a good starting point..

One of my commercial devices does this by having an inquiry and a command mode. Basically, in that device, to trigger the inquiry mode, you simultaneously press two buttons and it responds with a question mark. You answer the question mark with a single letter response.. For example, the letter "S" would tell the device that you would like to know the current morse speed setting. In that world, you actually communicate with the device rather than marching through a menu. You enter the command mode and give it single letter and parameter instructions, you enter the inquire mode and ask it single letter questions...

Ken AA7JC
Sierra Vista, AZ

From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com] On Behalf Of Ken Lotts (at home)
Sent: Friday, November 14, 2008 11:27 AM
To: AT_Sprint@yahoogroups.com
Subject: RE: [AT_Sprint] If Obama owned an ATS3B

Vojtech,

Thanks for the reply!

I have only a few minutes so I can only do a partial reply right now..

? This is a simple one. Actually in OK land I was told one shall send Vs during antenna tuning.

I am thinking that in reality, there are times when everyone resorts to a low power dead key as they struggle with difficult tuning situations in a field environment (and does a station ID at the end of course). The ATS3 even has a dead key tune position in its menu. There is no power adjustment so it is either full power or nothing.. given the choice of a full power dead key or a full power low duty cycle rapid pulse, I would choose the later every time (its easier on the finals and the battery). I would not eliminate the dead key feature, I would just add another choice..

I have an MFJ device that does this at 75WPM, 13% duty cycle and I find it to be wonderful.. That is why I would like to see this as an option in the ATS3X rigs..

I have never looked at and measured the pulses on a scope.. maybe I will get things set up if you are interested.

Ken AA7JC

Sierra Vista, AZ

From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com] On Behalf Of Vojtech Bubn?k
Sent: Friday, November 14, 2008 6:20 AM
To: AT_Sprint@yahoogroups.com
Subject: Re: [AT_Sprint] If Obama owned an ATS3B

Hi Ken.

> -chirp tuning to save batteries & finals (this is only firmware)

This is a simple one. Actually in OK land I was told one shall send Vs during antenna tuning.

> -cw speed indicator

Would you be more specific?

> -Enhance keying (variable parameters)

What do you want to configure? I think one shall send a perfectly timed morse code to be understood well, which is of high importance with QRP levels. I understand parameters like dash/dot ratio settnings to be useful for transmitter chains, where the mark is shortened by RX/TX relay. But with solid state BK there is IMHO no need for such settings.

What I find useful (and there is still space in FLASH) is to add AccuKeyer auto space feature and a mode simulating single lever paddle with iambic paddle. I will try to do that with "my" firmware.

> -I hate cryptic menus as much as the next guy but If embedded menu functions
> become an issue, make an *option* to disable or simplify them.

Would you please explain that? I am working on "my" firmware right now, so any idea will be appreciated.

> -swr indicator (maybe that only fires up in the tune mode?)

Well, a SWR bridge will take considerable space in the Altoids box. Otherwise it would not be difficult if you have two controller pins with A/D function available. Finally I decided NOT to put it into my device mostly because of space constraints, but also because of controller pins available (and because I am using Elecraft T1, which has SWR bridge built in). Anyway, if you want to do it, go ahead with the display driver mod, for illustration see the pictures, here is the link again. The firmware change to send to shift register instead of directly to display is not difficult.

http://www.kufr.cz/~ok1iak/HAM/ATS3b/index.php3

> -variable bandwidth filter (or bypass like the ats3)

My solution with D/A converter, Op Amp and 2 transistors to create weak current voltage source from 0 to full battery voltage to control varactors in IF filter is probably overkill for such a tiny radio. Elecraft is on purpose powering the whole digital part in K1 with 6V, which will open the IF filter up to 800Hz. My solution will open the filter wider with higher battery voltage. Elecraft KX1 tunes IF filter with analog pot sourced from 6 volts. The maximum catalog bandwidth of KX1 is 2kHz, which is IMO wider than K1 only because KX1 has less selective IF (3 crystals instead of 4).

If you want to go simple, I would recommend to go to http://www.danssmallpartsandkits.net/ and buy three of MVAM109. Quite pricey though. Replace the three shunt capacitors in IF filter with the varactors. Build a tiny SPDT switch into the box, must really throw before make. Switch between full battery voltage after the hot carrier diode and 3.5V stabilized voltage, use that to bias the varactors. You will get a switchable bandwidth between about 300Hz and 1.5kHz. The filter shape at 1.5kHz will not be pretty though.

If you are willing to buy from oversees, try ordering 3KB313 at http://www.elektronika.cz/inshop/scripts/set.asp?Level=420
These are the parts I am using in my ATS-3b. You may send a request to info@... .
The parts are surplus from cold war era. Three paired varactors are sold for about 60 cents without packing and shipping. Maybe a group buy would be worth, before they sell out.

> -built in touch keyer circuit

Buy two of QT113, DigiKey #427-1138-1-ND. Glue it to the top side of the ATS-3b board, wire it according to the datasheet. It seems Quantum Research was bought by Atmel.

> -SPY bi-wire vs jtag (MSP430F2132?)

What will be the benefit?

Mark K5LXP wrote:

> 4 layer board.

This is a means not requirement on its own. 4 layer board is more expensive and it is also harder to trace if something goes wrong. I would go with 4 layer board only if necessary.

Hank Greeb wrote:

> I think there are mods to make the more robust PA. See the PFR-3 for details.

I looked at the PFR-3 schematic and there is no essential difference between ATS-3b and PFR-3 PA. The FETs in ATS-3b are 2n7000, in PFR-3 BS170, which are slightly more robust, but essentially very much equivalent transistors.

I compared the ATS-3b/PFR-3 PA design with NorCal 2030. NorCal 2030 has overvoltage protection by measuring the peak voltage and closing PA driver. ATS-b3 just dumpens the spikes with 47V Zener diode. NorCal 2030 measures PA current and if it is too high, it limits PA driver. ATS-3b over current protection resets CPU, which may be annoying, but it has two reasons.

1) There is no controller pin available for over current protection sense in ATS-3b.
2) If controller goes havoc and leaves DDS pin16 low and MSP430 pin 24 high, the three 2n7000s in PA will burn in couple of seconds. I believe it happened to me with ATS-3a once during firmware debugging.

Actually this danger would be mitigated by putting 100nF cap between PA gates and driver as done in NorCal 2030 or Steve's special PSK31 transmitter.

I released controller P3 pins by using shift register to drive the display. Now I am using port 3 for following pins.

1 pin for shift register clock
2 pins for rotary encoder
2 pins for I2C bus (SDA, SCL)
1 pin to switch AF filters (CW/SSB)

I still have two pins left for other purposes. I will most probably use them for current sensing and peak RF sensing or PA voltage sensing or PA temperature sensing. Not exactly RF bridge, but it will allow one to calculate PA input power and will allow experimenting with more reasonable PA over current algorithms.

73, Vojtech OK1IAK

3820. Re: Pocketdigi PDA recommendation

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-15 21:26:41 UTC
From: Bruce Beford
Topic: 3811 Message: 3820

--- In AT_Sprint@yahoogroups.com, J. Haynes <eggs.4.iggs@...> wrote:
>
> ...the slicer?
>

The "slicer" is the optional audio interface described on page 31 of the ATS-3B manual. It allows digi mode use with a PDA with low audio output. See the '3B manual for details.

-Bruce N1RX

3821. November RFTB- Sunday night!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-16 01:07:29 UTC
From: Larry Makoski W2LJ
Topic: 3821 Message: 3821

Hello everyone!

Hard to believe that it's the 3rd Sunday in November already! Before you know it, Thanksgiving will be upon us. So we have something for you to be "pre-thankful" for. It's RFTB weekend!.

The Flying Pig's monthly "Run For the Bacon" QRP CW contest is this Sunday night! After a long day of raking leaves and cleaning gutters take some time for yourself to enjoy QRP and Amateur Radio.

This friendly, low pressure, 2 hour sprint runs from 9:00 to 11:00 PM Eastern Standard Time.

For all the details, please visit http://www.fpqrp.com/fpqrprun.php

The Flying Pigs QRP ARCI is now maintaining an archive of previous "pig-runs" for your viewing pleasure.

See you in the troughs!

73 de Larry W2LJ
FP# 612

3822. Re:[AT_Sprint] Re: Pocketdigi PDA recommendation

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-16 06:52:17 UTC
From: J. Haynes
Topic: 3811 Message: 3822

Actually, I build the simple interface for my Jornada720, but ended up never using either.
I just wondered about the word, 'slicer.'
jonathan

3823. Re: Re:[AT_Sprint] Re: Pocketdigi PDA recommendation

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-17 00:41:16 UTC
From: Vojtěch Bubník
Topic: 3811 Message: 3823

The word "slicer" is generally used for a circuit, which converts analog signal into digital one by thresholding. The threshold may be fixed or floating based on some kind of averaging, or the threshold may have hysteresis. Whatever works for that kind of signal.

73, Vojtech OK1IAK

> ------------ Původní zpráva ------------
> Od: J. Haynes <eggs.4.iggs@....jp>
> Předmět: Re:[AT_Sprint] Re: Pocketdigi PDA recommendation
> Datum: 16.11.2008 07:52:27
> --
> Actually, I build the simple interface for my Jornada720, but ended up never
> using either. I just wondered about the word, 'slicer.'
> jonathan
>
>
>

3824. Run for the Bacon, 11/16/2008, 6:00 pm

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-17 01:40:17 UTC
From: AT_Sprint@yahoogroups.com
Topic: 3824 Message: 3824

Reminder from: AT_Sprint Yahoo! Group
http://groups.yahoo.com/group/AT_Sprint/cal

Run for the Bacon
Sunday November 16, 2008
6:00 pm - 8:00 pm
(This event repeats every month on the third Sunday.)
Location: Your shack or anywhere

Notes:
This Sunday evening, the Flying Pigs Amateur Radio Club International will be holding its monthly Run For The Bacon. This is a friendly, two hour QRP CW Sprint, which is open to ALL radio amateurs, will last from 9:00 - 11:00PM EDT (0200-0400 UTC Monday).

You may work stations once per band on 160, 80, 40, 20, 15 or 10 Meters. Suggested starting frequencies are 1.812, 3.562, 7.044, 14.062, 21.062, and 28.062 MHz.

The exchange is RST, S/P/C (State, Province, Country) and Flying Pigs membership number. If you're not a member of the Flying Pigs, and would like to be; then please cli

All Rights Reserved
Copyright ? 2008
Yahoo! Inc.
http://www.yahoo.com

Privacy Policy:
http://privacy.yahoo.com/privacy/us

Terms of Service:
http://docs.yahoo.com/info/terms/

3825. NAQCC Sprint Wednesday night!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-17 02:45:51 UTC
From: NAQCC
Topic: 2848 Message: 3825

NAQCC Sprint Wednesday night!
This coming Wednesday evening will be the monthly NAQCC Sprint for November, 2008.

I will refer you to the proper URL:

http://www.arm-tek.net/~yoel/sprint200811.html

There you will find all the details as to time, frequencies and also a special prize.

This month's Special Award goes to the winner of a drawing among the following: The one making the highest score in each division and using a homebrew key or bug they made themselves. Note that you must have made it all by yourself from scratch. It can't have been made by someone else.

This is a monthly event that caters to the CW veteran, the CW newcomer, straight key and bug fans. All are welcome to participate (this includes QRO); but you must use QRP power levels to compete for awards.

Come join us and have a real good time!

73 de Dave VA3RJ
NAQCC #0004

3826. Re: [AT_Sprint] Re: Butane Soldering Iron For SMT SMD work

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-18 23:57:00 UTC
From: Full Some
Topic: 3764 Message: 3826

TimI never tried it. Interesting thought; however, the narrow field of heat might only allow a couple of smt parts to be "soldered" at a time. But, this might be good where one is desoldering an individual part as all contacts would be heated allowing for fairly easy removal - this could be an alternative to the two soldering iron technique.
fs
--- On Fri, 11/14/08, qwasty <qwasty@...> wrote:
From: qwasty <qwasty@...>
Subject: [AT_Sprint] Re: Butane Soldering Iron For SMT SMD work
To: AT_Sprint@yahoogroups.com
Date: Friday, November 14, 2008, 6:44 AM

That's interesting. Did you ever try using the heat blower on SMT

SMD's?

--- In AT_Sprint@yahoogrou ps.com, Full Some <full.some@. ..> wrote:

>

> I have used a Portasol butane soldering pencil for the majority of

my kit assemblies until buying a temp controlled unti. I used the 1

mm Portasol tip for the ATS 2 and ATS 3. Where more heat is

required on the ground side, I used the next larger tip or turned up

the heat. You can adjust the heat and board burning and trace

lifting are almost eliminated with experience.   The catalytic ports

on the tip put out more than enough heat to apply shrink tubing. I

recently used the Portasol to solder a number of PL-259s outside when

fixing my Gap antenna - I had to use the largest Portasol tip to get

enough heat.

>

> The tips can be a little pricy.

>

> One does have to have a ready supply of butane (I buy the

inexpensive imported stuff) and extra tips (they break due to heat/

metal fatigue). Also, I do not have a rest so I rest the tip over

the edge of the assembly table - usually I solder 5 or six parts and then turn off the unit. The unit heats up quite quickly to soldering temperature - you get to know the right setting. If when soldering you need more heat, you just dial up more heat.

>

> Overall, I have been pleased with the units (I have an old and new style) and have not destroyed a part or board yet. I have also used the Radio Shack unit but I only have the one tip that came with the unit.

>

>

>

> --- On Sat, 11/8/08, Bill Noyce <WBNoyce@... > wrote:

> From: Bill Noyce <WBNoyce@... >

> Subject: Re: [AT_Sprint] Re: Butane Soldering Iron For SMT SMD work

> To: AT_Sprint@yahoogrou ps.com

> Date: Saturday, November 8, 2008, 7:41 PM

>

>

>

>

>

>

>

>

>

>

>

> Re: Butane soldering irons vs. torches

>

>

>

> I may not have made it clear that used the RS butane soldering IRON,

>

> not a torch. It works just like an electric iron for the classic

"one

>

> joint at a time" method. Lightly tin one pad, lay the part on with

>

> tweezers, hold it down, reheat that joint, solder other pin(s) of

the

>

> part, revisit first joint as needed.

>

>

>

> I haven't tried using the torch as a heat gun for the solder-paste

>

> method. (I have used the hot-air embosser. It is so cheap and

works

>

> so well I'm not looking for an alternative.)

>

>

>

> For unsoldering multi-pin devices, I think KD1JV suggests this

trick.

>

> Thread some fine enameled wire under the pins where they angle out

>

> from the plastic package, and anchor one end (perhaps by soldering

to

>

> a convenient point on the board). Apply a gentle pull to the side

as

>

> you reheat the pins. The wire will sweep under each pin as it gets

>

> hot enough and separate it from the PCB. Repeat for the other row

(s)

>

> of pins I did have to unsolder a part -- can't remember if it was

the

>

> MCU or the DDS that I carefully soldered in backwards -- and this

>

> method worked great.

>

>

>

> -- Bill, AB1AV.

>

3827. OT: My list of Yahoo Groups :)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-26 05:22:01 UTC
From: Dennis Blanchard
Topic: 3827 Message: 3827

Hi everyone,

Hope this is ok to post here... You can see a list of my groups on Grouply at the link below. Maybe you'll find some you want to join. My main interests are amateur radio, bicycling and hiking the Appalachian Trail. Call letter K1YPP and trail name "K1."

Dennis

Here's the link:
http://www.grouply.com/register.php?tmg=1807002&vt=

==========
This message was posted by a fellow group member who uses Grouply instead of email to access this group. Grouply blocks additional invitations from being sent to this group by anyone for 30 days. Group owners can permanently block future invitations. For more on how Grouply maintains privacy and protects you, see http://blog.grouply.com/protect/ .

3828. Re: Pocketdigi PDA recommendation

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-26 15:47:04 UTC
From: zevkroz
Topic: 3811 Message: 3828

I followed your suggestion and picked up a Jornada 720. Now I have to figure out how to load pocket digi. I've tried to use active sync to load it but the PC and J720 won't link.

I'm going to try to copy the files (.cab. inin and .dat) to a cf card and then install from there.

Any suggestions will be appreciated. Thanks. Steve
--- In AT_Sprint@yahoogroups.com, Vojtìch Bubník <bubnikv@...> wrote:
>
> Hi Steve.
>
> I have Jornada 720 too. It is a nice device. It has essentially the same hardware as iPaq 3630, only twice as big screen and 3/4 size keyboard. I bought my device with cracked display hinge for about $50. Jornada 720 runs on two LiIon cells and mine runs much longer than the iPaq 3630.
>
> If you want to run it with ATS3B, you will need to build the slicer. It's sound output is too weak to drive paddle input directly.
>
> 73, Vojtech OK1IAK
>
> > ------------ Pùvodní zpráva ------------
> > Od: Bill <bgriffin@...>
> > Pøedmìt: [AT_Sprint] Re: Pocketdigi PDA recommendation
> > Datum: 15.11.2008 01:36:07
> > --
> > I really like the Jornada 720. I bought mine used for $75,
> > see em for 100.
> >
> > Bill, ni5x.
> >
> >
> > > I am looking for a PDA to run Pocketdigi with my ATS3B. Can anyone
> > > recommend a good (inexpensive) PDA with the features I need to run
> > > this program? Thanks. Steve, K2ZPF
> > >
> >
> >
> >
> >
> >
> >
>

3829. Re: [AT_Sprint] OT: My list of Yahoo Groups :)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-26 15:49:35 UTC
From: Hank Greeb
Topic: 3827 Message: 3829

No problem with the OT post, but I've been advised by a whole bunch of people to avoid the "grouply" grouping of yahoo groups for various reasons, which I won't go into here. If anyone wants to know the reasons, I'll dig up the messages and forward them privately.

72/73 de n8xx Hg

Dennis Blanchard wrote:
> Hi everyone,
>
> Hope this is ok to post here... You can see a list of my groups on
> Grouply at the link below. Maybe you'll find some you want to join. My
> main interests are amateur radio, bicycling and hiking the Appalachian
> Trail. Call letter K1YPP and trail name "K1."
>
> Dennis
>
> Here's the link:
> http://www.grouply.com/register.php?tmg=1807002&vt=
> <http://www.grouply.com/register.php?tmg=1807002&vt=>

3830. Re: Pocketdigi PDA recommendation

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-26 17:21:42 UTC
From: zevkroz
Topic: 3811 Message: 3830

I copied the files to a CF card. Mounted it in the J720 and then
double clicked on the .cab file. It seemed to install the
program...however...when I tried to execute the program, it says pops
a window that says "Cannot find 'PocketDigi' or one of its components.
Any help? Thanks Steve

--- In AT_Sprint@yahoogroups.com, "zevkroz" <skrosner@...> wrote:
>
> I followed your suggestion and picked up a Jornada 720. Now I have to
> figure out how to load pocket digi. I've tried to use active sync to
> load it but the PC and J720 won't link.
>
> I'm going to try to copy the files (.cab. inin and .dat) to a cf card
> and then install from there.
>
> Any suggestions will be appreciated. Thanks. Steve
> --- In AT_Sprint@yahoogroups.com, Vojtìch Bubník <bubnikv@> wrote:
> >
> > Hi Steve.
> >
> > I have Jornada 720 too. It is a nice device. It has essentially the
> same hardware as iPaq 3630, only twice as big screen and 3/4 size
> keyboard. I bought my device with cracked display hinge for about $50.
> Jornada 720 runs on two LiIon cells and mine runs much longer than the
> iPaq 3630.
> >
> > If you want to run it with ATS3B, you will need to build the slicer.
> It's sound output is too weak to drive paddle input directly.
> >
> > 73, Vojtech OK1IAK
> >
> > > ------------ Pùvodní zpráva ------------
> > > Od: Bill <bgriffin@>
> > > Pøedmìt: [AT_Sprint] Re: Pocketdigi PDA recommendation
> > > Datum: 15.11.2008 01:36:07
> > > --
> > > I really like the Jornada 720. I bought mine used for $75,
> > > see em for 100.
> > >
> > > Bill, ni5x.
> > >
> > >
> > > > I am looking for a PDA to run Pocketdigi with my ATS3B. Can
anyone
> > > > recommend a good (inexpensive) PDA with the features I need to run

> > > > this program? Thanks. Steve, K2ZPF
> > > >
> > >
> > >
> > >
> > >
> > >
> >
>

3831. Re: [AT_Sprint] Re: Pocketdigi PDA recommendation

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-26 19:26:22 UTC
From: Vojtěch Bubník
Topic: 3811 Message: 3831

Hi Steve.

I would just copy the exe file to compact flash and start it from there.
Download the PocketDigi-1.0.0.11-arm.zip and extract the PocketDigi-hpc.exe file to compact flash. Make sure you are not running the non-hpc executable on your handheld pc device. It will not work.

The installer was created by Patrick N0HR and he did not test it on handheld pc, so it most probably does not work. I would advice you to deinstall Patrick's installer first.

73, Vojtech

> ------------ Původní zpráva ------------
> Od: zevkroz <skrosner@...>
> Předmět: [AT_Sprint] Re: Pocketdigi PDA recommendation
> Datum: 26.11.2008 18:21:55
> --
> I copied the files to a CF card. Mounted it in the J720 and then
> double clicked on the .cab file. It seemed to install the
> program...however...when I tried to execute the program, it says pops
> a window that says "Cannot find 'PocketDigi' or one of its components.
> Any help? Thanks Steve
>
>
> --- In AT_Sprint@yahoogroups.com, "zevkroz" <skrosner@...> wrote:
> >
> > I followed your suggestion and picked up a Jornada 720. Now I have to
> > figure out how to load pocket digi. I've tried to use active sync to
> > load it but the PC and J720 won't link.
> >
> > I'm going to try to copy the files (.cab. inin and .dat) to a cf card
> > and then install from there.
> >
> > Any suggestions will be appreciated. Thanks. Steve
> > --- In AT_Sprint@yahoogroups.com, Vojtìch Bubník <bubnikv@> wrote:
> > >
> > > Hi Steve.
> > >
> > > I have Jornada 720 too. It is a nice device. It has essentially the
> > same hardware as iPaq 3630, only twice as big screen and 3/4 size
> > keyboard. I bought my device with cracked display hinge for about $50.
> > Jornada 720 runs on two LiIon cells and mine runs much longer than the
> > iPaq 3630.
> > >
> > > If you want to run it with ATS3B, you will need to build the slicer.
> > It's sound output is too weak to drive paddle input directly.

> > >
> > > 73, Vojtech OK1IAK
> > >
> > > > ------------ Pùvodní zpráva ------------
> > > > Od: Bill <bgriffin@>
> > > > Pøedmìt: [AT_Sprint] Re: Pocketdigi PDA recommendation
> > > > Datum: 15.11.2008 01:36:07
> > > > --
> > > > I really like the Jornada 720. I bought mine used for $75,
> > > > see em for 100.
> > > > >
> > > > Bill, ni5x.
> > > > >
> > > > >
> > > > > I am looking for a PDA to run Pocketdigi with my ATS3B. Can
> anyone
> > > > > recommend a good (inexpensive) PDA with the features I need to run
> > > > > this program? Thanks. Steve, K2ZPF
> > > > > >
> > > > >
> > > > >
> > > > >
> > > > >
> > > > >
> > > >
> > >
> >
>
>
>
>
>

3832. Re:[AT_Sprint] Re: Pocketdigi PDA recommendation

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-26 21:37:37 UTC
From: J. Haynes
Topic: 3811 Message: 3832

I gave up on activesync and got a 2gig cf card. That worked.
Kc7fys Jonathan

3833. Re: Pocketdigi PDA recommendation

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-26 21:41:27 UTC
From: zevkroz
Topic: 3811 Message: 3833

Vojtech,
I downloaded the PocketDigi_1_0_11.exe to my PC. I unpacked it and got the folowing 4 files:

PocketDigi.ini
PocketDigi_PPC_MIPS 4000.cab
PocketDigi_PPC_StrongARM.cab
suninstall.dat

I copied the PocketDigi_PPC_StrongARM.cab to the CF and moved it to the J720.

I executed the file and it installed an application into the \Program Files\Pocketdigi folder. The application is 263KB and is dated 1/6/08 2:39:32 PM.

When I execute the application I get the "Cannot find 'PocketDigi or one of its components message.

Help. Steve

--- In AT_Sprint@yahoogroups.com, Vojtìch Bubník <bubnikv@...> wrote:
>
> Hi Steve.
>
> I would just copy the exe file to compact flash and start it from there.
> Download the PocketDigi-1.0.0.11-arm.zip and extract the PocketDigi-hpc.exe file to compact flash. Make sure you are not running the non-hpc executable on your handheld pc device. It will not work.
>
> The installer was created by Patrick N0HR and he did not test it on handheld pc, so it most probably does not work. I would advice you to deinstall Patrick's installer first.
>
> 73, Vojtech
>
> > ---------- PÅ¯vodnÃ zprÃ¡va ----------
> > Od: zevkroz <skrosner@...>
> > PÅ□edmÄ□t: [AT_Sprint] Re: Pocketdigi PDA recommendation
> > Datum: 26.11.2008 18:21:55
> > ----------
> > I copied the files to a CF card. Mounted it in the J720 and then
> > double clicked on the .cab file. It seemed to install the
> > program...however...when I tried to execute the program, it says pops
> > a window that says "Cannot find 'PocketDigi' or one of its components.

> > Any help? Thanks Steve
> >
> >
> > --- In AT_Sprint@yahoogroups.com, "zevkroz" <skrosner@> wrote:
> > >
> > > I followed your suggestion and picked up a Jornada 720. Now I
have to
> > > figure out how to load pocket digi. I've tried to use active
sync to
> > > load it but the PC and J720 won't link.
> > >
> > > I'm going to try to copy the files (.cab. inin and .dat) to a cf
card
> > > and then install from there.
> > >
> > > Any suggestions will be appreciated. Thanks. Steve
> > > --- In AT_Sprint@yahoogroups.com, VojtÃ¬ch BubnÃk<bubnikv@> wrote:
> > > >
> > > > Hi Steve.
> > > >
> > > > I have Jornada 720 too. It is a nice device. It has
essentially the
> > > same hardware as iPaq 3630, only twice as big screen and 3/4 size
> > > keyboard. I bought my device with cracked display hinge for
about $50.
> > > Jornada 720 runs on two LiIon cells and mine runs much longer
than the
> > > iPaq 3630.
> > > >
> > > > If you want to run it with ATS3B, you will need to build the
slicer.
> > > It's sound output is too weak to drive paddle input directly.
> > > >
> > > > 73, Vojtech OK1IAK
> > > >
> > > > ---------- PÃ¹vodnÃ zprÃ¡va ----------
> > > > Od: Bill <bgriffin@>
> > > > PÃ¸edmÃ¬t: [AT_Sprint] Re: Pocketdigi PDA recommendation
> > > > Datum: 15.11.2008 01:36:07
> > > > ----------
> > > > I really like the Jornada 720. I bought mine used for $75,
> > > > see em for 100.
> > > >
> > > > Bill, ni5x.
> > > >
> > > >
> > > > > I am looking for a PDA to run Pocketdigi with my ATS3B. Can
> > anyone
> > > > > recommend a good (inexpensive) PDA with the features I

need to run
> > > > > > this program? Thanks. Steve, K2ZPF
> > > > > >
> > > > > >
> > > > > >
> > > > > >
> > > > > >
> > > > > >
> > > > >
> > > >
> >
> >
> >
> >
> >
>

3834. Re: [AT_Sprint] Re: Pocketdigi PDA recommendation

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-27 00:32:13 UTC
From: Vojtěch Bubník
Topic: 3811 Message: 3834

Hi Steve.

I do not know what the installer does and I suppose that it was not tested on Jornada.
Simply deinstall it and copy the executable manually.

Download PocketDigi-1.0.11-arm.zip and unzip it on your PC.
Copy PocketDigi-hpc.exe on your flash card.
Start PocketDigi-hpc.exe from flash card on your Jornada 720.

Vojtech

> ---------- Původní zpráva ----------
> Od: zevkroz <skrosner@...>
> Předmět: [AT_Sprint] Re: Pocketdigi PDA recommendation
> Datum: 26.11.2008 22:41:38
> ----------
> Vojtech,
> I downloaded the PocketDigi_1_0_11.exe to my PC. I unpacked it and
> got the folowing 4 files:
>
> PocketDigi.ini
> PocketDigi_PPC_MIPS 4000.cab
> PocketDigi_PPC_StrongARM.cab
> suninstall.dat
>
> I copied the PocketDigi_PPC_StrongARM.cab to the CF and moved it to
> the J720.
>
> I executed the file and it installed an application into the \Program
> Files\Pocketdigi folder. The application is 263KB and is dated 1/6/08
> 2:39:32 PM.
>
> When I execute the application I get the "Cannot find 'PocketDigi or
> one of its components message.
>
> Help. Steve
>
>
> --- In AT_Sprint@yahoogroups.com, Vojtìch Bubník <bubnikv@...> wrote:
> >
> > Hi Steve.
> >
> > I would just copy the exe file to compact flash and start it from there.
> > Download the PocketDigi-1.0.0.11-arm.zip and extract the
> PocketDigi-hpc.exe file to compact flash. Make sure you are not

> running the non-hpc executable on your handheld pc device. It will not
> work.
> >
> > The installer was created by Patrick N0HR and he did not test it on
> handheld pc, so it most probably does not work. I would advice you to
> deinstall Patrick's installer first.
> >
> > 73, Vojtech
> >
> > > ---------- PÅ¯vodnÃ zprÃ¡va ----------
> > > Od: zevkroz <skrosner@...>
> > > PÅ□edmÄ□t: [AT_Sprint] Re: Pocketdigi PDA recommendation
> > > Datum: 26.11.2008 18:21:55
> > > ----------
> > > I copied the files to a CF card. Mounted it in the J720 and then
> > > double clicked on the .cab file. It seemed to install the
> > > program...however...when I tried to execute the program, it says pops
> > > a window that says "Cannot find 'PocketDigi' or one of its components.
> > > Any help? Thanks Steve
> > >
> > >
> > > --- In AT_Sprint@yahoogroups.com, "zevkroz" <skrosner@> wrote:
> > > >
> > > > I followed your suggestion and picked up a Jornada 720. Now I
> have to
> > > > figure out how to load pocket digi. I've tried to use active
> sync to
> > > > load it but the PC and J720 won't link.
> > > >
> > > > I'm going to try to copy the files (.cab. inin and .dat) to a cf
> card
> > > > and then install from there.
> > > >
> > > > Any suggestions will be appreciated. Thanks. Steve
> > > > --- In AT_Sprint@yahoogroups.com, VojtÃ¬ch BubnÃk<bubnikv@> wrote:
> > > > >
> > > > > Hi Steve.
> > > > >
> > > > > I have Jornada 720 too. It is a nice device. It has
> essentially the
> > > > > same hardware as iPaq 3630, only twice as big screen and 3/4 size
> > > > > keyboard. I bought my device with cracked display hinge for
> about $50.
> > > > > Jornada 720 runs on two LiIon cells and mine runs much longer
> than the
> > > > > iPaq 3630.
> > > > >
> > > > > If you want to run it with ATS3B, you will need to build the
> slicer.

> > > > It's sound output is too weak to drive paddle input directly.
> > > > >
> > > > > 73, Vojtech OK1IAK
> > > > >
> > > > > > ---------- PÃ¹vodnÃ zprÃ¡va ----------
> > > > > > Od: Bill <bgriffin@>
> > > > > > PÃ¸edmÃ¬t: [AT_Sprint] Re: Pocketdigi PDA recommendation
> > > > > > Datum: 15.11.2008 01:36:07
> > > > > > ----------
> > > > > > I really like the Jornada 720. I bought mine used for $75,
> > > > > > see em for 100.
> > > > > >
> > > > > > Bill, ni5x.
> > > > > >
> > > > > >
> > > > > > > I am looking for a PDA to run Pocketdigi with my ATS3B. Can
> > > anyone
> > > > > > > recommend a good (inexpensive) PDA with the features I
> need to run
> > > > > > > this program? Thanks. Steve, K2ZPF
> > > > > > >
> > > > > >
> > > > > >
> > > > > >
> > > > > >
> > > > > >
> > > > > >
> > > > >
> > > >
> > > >
> > > >
> > > >
> > > >
> > >
> > >
> >
>
>
>
>
>

3835. Re: Pocketdigi PDA recommendation

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-29 18:10:32 UTC
From: zevkroz
Topic: 3811 Message: 3835

I did a search for the file name you sent me. When I found it I downloaded it and copied it to the CF card. It worked. Now to heat up the soldering iron and build the interface. Thanks for all your help. Steve K2ZPF

--- In AT_Sprint@yahoogroups.com, Vojtìch Bubník <bubnikv@...> wrote:
>
> Hi Steve.
>
> I do not know what the installer does and I suppose that it was not tested on Jornada. Simply deinstall it and copy the executable manually.
>
> Download PocketDigi-1.0.11-arm.zip and unzip it on your PC.
> Copy PocketDigi-hpc.exe on your flash card.
> Start PocketDigi-hpc.exe from flash card on your Jornada 720.
>
> Vojtech
>

3836. Re: OT: My list of Yahoo Groups :)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-29 19:35:17 UTC
From: qwasty
Topic: 3827 Message: 3836

I'm interested to know why to avoid grouply.

--- In AT_Sprint@yahoogroups.com, Hank Greeb <n8xx@...> wrote:
>
> No problem with the OT post, but I've been advised by a whole bunch
of
> people to avoid the "grouply" grouping of yahoo groups for various
> reasons, which I won't go into here. If anyone wants to know the
> reasons, I'll dig up the messages and forward them privately.
>
> 72/73 de n8xx Hg
>
> Dennis Blanchard wrote:
> > Hi everyone,
> >
> > Hope this is ok to post here... You can see a list of my groups
on
> > Grouply at the link below. Maybe you'll find some you want to
join. My
> > main interests are amateur radio, bicycling and hiking the
Appalachian
> > Trail. Call letter K1YPP and trail name "K1."
> >
> > Dennis
> >
> > Here's the link:
> > http://www.grouply.com/register.php?tmg=1807002&vt=
> > <http://www.grouply.com/register.php?tmg=1807002&vt=>
>

3837. Re: OT: My list of Yahoo Groups :)

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-11-29 22:12:31 UTC
From: qwasty
Topic: 3827 Message: 3837

Just did some reading, and I'm convinced Grouply is not for me.

--- In AT_Sprint@yahoogroups.com, "qwasty" <qwasty@...> wrote:
>
> I'm interested to know why to avoid grouply.
>
>
>
> --- In AT_Sprint@yahoogroups.com, Hank Greeb <n8xx@> wrote:
> >
> > No problem with the OT post, but I've been advised by a whole
bunch
> of
> > people to avoid the "grouply" grouping of yahoo groups for
various
> > reasons, which I won't go into here. If anyone wants to know the
> > reasons, I'll dig up the messages and forward them privately.
> >
> > 72/73 de n8xx Hg
> >
> > Dennis Blanchard wrote:
> > > Hi everyone,
> > >
> > > Hope this is ok to post here... You can see a list of my groups
> on
> > > Grouply at the link below. Maybe you'll find some you want to
> join. My
> > > main interests are amateur radio, bicycling and hiking the
> Appalachian
> > > Trail. Call letter K1YPP and trail name "K1."
> > >
> > > Dennis
> > >
> > > Here's the link:
> > > http://www.grouply.com/register.php?tmg=1807002&vt=
> > > <http://www.grouply.com/register.php?tmg=1807002&vt=>
> >
>

3838. Simple Digital Interface not working on iPAQ 2210

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-12-02 02:02:04 UTC
From: Andreas Burkart
Topic: 3838 Message: 3838

Folks,

I finished my ATS - 3B a little while ago and built the simple interface cable to connect it to my IPaq 2210. While the PocketDigi on the Ipaq works flawlessly with the built in microphone attached to the ATS3-B head phones or my Kenwood TH6 loudspeaker, it simply does not work with the simple digital interface cable in digital mode. I modified the cable and took out the two 1K resistors on the PC side and tried the iPAQ and my laptop --> unsucessfully.

It seems that two things are happening here:

1. When I attach the cable to the ATS-3B , the ATS-3B picks up noise from the IPAQ (it gets worse, when the power adapter is connected to ththe iPAQ)

2. It seems that the two 1K resistors are not switching off the internal microphone of the iPAQ, and ambient noise is being picked up (pencil drop etc.)

3. There is only noise on the waterfall screen but no clear line even with strong CW signal in the head phone

I exhausted all possible settings on IPAQ and Pocketdigi.

I selected the iPAQ 2210 because of the built in microphone and 3.5 mm audio input.

I wonder if you could help me further trouble shooting.

Would the sound card interface cable work better ?

P.S. the CAT function worked for a little while but stopped altogether.

73
Andreas Burkart
kg4pyp

3839. Re: [AT_Sprint] Simple Digital Interface not working on iPAQ 2210

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-12-02 04:10:15 UTC
From: Stephen Wandling
Topic: 3838 Message: 3839

Andreas,

To check the simple things first, are you putting the ATS3B into Digital Mode before connecting the cable?

72
Stephen
VE7NSD

Andreas Burkart wrote:
> Folks,
>
> I finished my ATS - 3B a little while ago and built the simple
> interface cable to connect it to my IPaq 2210. While the PocketDigi
> on the Ipaq works flawlessly with the built in microphone attached
> to the ATS3-B head phones or my Kenwood TH6 loudspeaker, it simply
> does not work with the simple digital interface cable in digital
> mode. I modified the cable and took out the two 1K resistors on the
> PC side and tried the iPAQ and my laptop --> unsucessfully.
>
> It seems that two things are happening here:
>
> 1. When I attach the cable to the ATS-3B , the ATS-3B picks up noise
> from the IPAQ (it gets worse, when the power adapter is connected
> to ththe iPAQ)
>
> 2. It seems that the two 1K resistors are not switching off the
> internal microphone of the iPAQ, and ambient noise is being picked
> up (pencil drop etc.)
>
> 3. There is only noise on the waterfall screen but no clear line
> even with strong CW signal in the head phone
>
> I exhausted all possible settings on IPAQ and Pocketdigi.
>
> I selected the iPAQ 2210 because of the built in microphone and 3.5
> mm audio input.
>
> I wonder if you could help me further trouble shooting.
>
> Would the sound card interface cable work better ?
>
> P.S. the CAT function worked for a little while but stopped
> altogether.
>
> 73

> Andreas Burkart
> kg4pyp
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>
>
>

--
"You never change things by fighting the existing reality.
To change something, build a new model that makes the
existing model obsolete." -- Buckminster Fuller

"First they ignore you, then they ridicule you, then they
fight you, then you win" -- Gandhi

3840. Re: Simple Digital Interface not working on iPAQ 2210

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-12-02 13:17:15 UTC
From: Andreas Burkart
Topic: 3838 Message: 3840

Hi Stephen,

I made sure that the ATS3B is in digital mode before connecting it.

72
Andreas
kg4pyp

--- In AT_Sprint@yahoogroups.com, Stephen Wandling <swandling@...>
wrote:
>
> Andreas,
>
> To check the simple things first, are you putting the ATS3B into
Digital
> Mode before connecting the cable?
>
> 72
> Stephen
> VE7NSD
>
> Andreas Burkart wrote:
> > Folks,
> >
> > I finished my ATS - 3B a little while ago and built the simple
> > interface cable to connect it to my IPaq 2210. While the
PocketDigi
> > on the Ipaq works flawlessly with the built in microphone
attached
> > to the ATS3-B head phones or my Kenwood TH6 loudspeaker, it
simply
> > does not work with the simple digital interface cable in digital
> > mode. I modified the cable and took out the two 1K resistors on
the
> > PC side and tried the iPAQ and my laptop --> unsucessfully.
> >
> > It seems that two things are happening here:
> >
> > 1. When I attach the cable to the ATS-3B , the ATS-3B picks up
noise
> > from the IPAQ (it gets worse, when the power adapter is
connected
> > to ththe iPAQ)
> >
> > 2. It seems that the two 1K resistors are not switching off the
> > internal microphone of the iPAQ, and ambient noise is being

picked
> > up (pencil drop etc.)
> >
> > 3. There is only noise on the waterfall screen but no clear line
> > even with strong CW signal in the head phone
> >
> > I exhausted all possible settings on IPAQ and Pocketdigi.
> >
> > I selected the iPAQ 2210 because of the built in microphone and
3.5
> > mm audio input.
> >
> > I wonder if you could help me further trouble shooting.
> >
> > Would the sound card interface cable work better ?
> >
> > P.S. the CAT function worked for a little while but stopped
> > altogether.
> >
> > 73
> > Andreas Burkart
> > kg4pyp
> >
> >
> > ------------------------------------
> >
> > Yahoo! Groups Links
> >
> >
> >
> >
> >
>
> --
> "You never change things by fighting the existing reality.
> To change something, build a new model that makes the
> existing model obsolete." -- Buckminster Fuller
>
> "First they ignore you, then they ridicule you, then they
> fight you, then you win" -- Gandhi
>

3841. Re: [AT_Sprint] Simple Digital Interface not working on iPAQ 2210

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-12-03 03:48:49 UTC
From: Vojtěch Bubník
Topic: 3838 Message: 3841

Hi Andreas.

> 1. When I attach the cable to the ATS-3B , the ATS-3B picks up noise
> from the IPAQ (it gets worse, when the power adapter is connected
> to ththe iPAQ)

I do not wonder that ATS is picking noise from the switched power supply. Run it on internal battery.

> P.S. the CAT function worked for a little while but stopped
> altogether.

The simple interface requires quite high amplitude from your iPaq. You will have to crank up sound volume to maximum or nearly maximum. Try to experiment. It may happen, that the amplitude from your iPaq is just on the threshold to trigger the schmitt inputs in ATS. You may confirm it by trying to connect ATS through the simple interface to your PC. Also do not forget to switch off sound notifications on your iPaq, otherwise they will interfere with the data sent over the simple interface.

73, Vojtech OK1IAK

3842. Re: [AT_Sprint] Simple Digital Interface not working on iPAQ 2210

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-12-03 13:45:10 UTC
From: Andreas Burkart
Topic: 3838 Message: 3842

Hi Stephen,

thx for yoru feedback. yes I did of of course.

I wonder if I should build the more complicated interface !

72

Andreas
kg4pyp

--- On Tue, 12/2/08, Stephen Wandling <swandling@...> wrote:

From: Stephen Wandling <swandling@...>
Subject: Re: [AT_Sprint] Simple Digital Interface not working on iPAQ 2210
To: AT_Sprint@yahoogroups.com
Date: Tuesday, December 2, 2008, 4:10 AM

Andreas,

To check the simple things first, are you putting the ATS3B into Digital
Mode before connecting the cable?

72
Stephen
VE7NSD

Andreas Burkart wrote:
> Folks,
>
> I finished my ATS - 3B a little while ago and built the simple
> interface cable to connect it to my IPaq 2210. While the PocketDigi
> on the Ipaq works flawlessly with the built in microphone attached
> to the ATS3-B head phones or my Kenwood TH6 loudspeaker, it simply
> does not work with the simple digital interface cable in digital
> mode. I modified the cable and took out the two 1K resistors on the
> PC side and tried the iPAQ and my laptop --> unsucessfully.
>
> It seems that two things are happening here:
>
> 1. When I attach the cable to the ATS-3B , the ATS-3B picks up noise
> from the IPAQ (it gets worse, when the power adapter is connected
> to ththe iPAQ)
>
> 2. It seems that the two 1K resistors are not switching off the
> internal microphone of the iPAQ, and ambient noise is being picked
> up (pencil drop etc.)

>
> 3. There is only noise on the waterfall screen but no clear line
> even with strong CW signal in the head phone
>
> I exhausted all possible settings on IPAQ and Pocketdigi.
>
> I selected the iPAQ 2210 because of the built in microphone and 3.5
> mm audio input.
>
> I wonder if you could help me further trouble shooting.
>
> Would the sound card interface cable work better ?
>
> P.S. the CAT function worked for a little while but stopped
> altogether.
>
> 73
> Andreas Burkart
> kg4pyp
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>
>
>

--
"You never change things by fighting the existing reality.
To change something, build a new model that makes the
existing model obsolete." -- Buckminster Fuller

"First they ignore you, then they ridicule you, then they
fight you, then you win" -- Gandhi

Yahoo! Groups Links

3843. Re: [AT_Sprint] Simple Digital Interface not working on iPAQ 2210

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-12-03 17:44:50 UTC
From: Stephen Wandling
Topic: 3838 Message: 3843

Hi Andreas,

I suspect that Vojtech's advice to you is probably the best, since he is
the one who made digital mode possible on the ATS rigs. Can get the
digital mode to work on a regular computer?

72
Stephen
VE7NSD

Andreas Burkart wrote:
> Hi Stephen,
>
> thx for yoru feedback. yes I did of of course.
>
> I wonder if I should build the more complicated interface !
>
> 72
>
> Andreas
> kg4pyp
>
> --- On *Tue, 12/2/08, Stephen Wandling /<swandling@...>/* wrote:
>
> From: Stephen Wandling <swandling@...>
> Subject: Re: [AT_Sprint] Simple Digital Interface not working on
> iPAQ 2210
> To: AT_Sprint@yahoogroups.com
> Date: Tuesday, December 2, 2008, 4:10 AM
>
> Andreas,
>
> To check the simple things first, are you putting the ATS3B into Digital
> Mode before connecting the cable?
>
> 72
> Stephen
> VE7NSD
>
> Andreas Burkart wrote:
> > Folks,
> >
> > I finished my ATS - 3B a little while ago and built the simple
> > interface cable to connect it to my IPaq 2210. While the PocketDigi
> > on the Ipaq works flawlessly with the built in microphone attached
> > to the ATS3-B head phones or my Kenwood TH6 loudspeaker, it simply

> > does not work with the simple digital interface cable in digital
> > mode. I modified the cable and took out the two 1K resistors on the
> > PC side and tried the iPAQ and my laptop --> unsucessfully.
> >
> > It seems that two things are happening here:
> >
> > 1. When I attach the cable to the ATS-3B , the ATS-3B picks up noise
> > from the IPAQ (it gets worse, when the power adapter is connected
> > to ththe iPAQ)
> >
> > 2. It seems that the two 1K resistors are not switching off the
> > internal microphone of the iPAQ, and ambient noise is being picked
> > up (pencil drop etc.)
> >
> > 3. There is only noise on the waterfall screen but no clear line
> > even with strong CW signal in the head phone
> >
> > I exhausted all possible settings on IPAQ and Pocketdigi.
> >
> > I selected the iPAQ 2210 because of the built in microphone and 3.5
> > mm audio input.
> >
> > I wonder if you could help me further trouble shooting.
> >
> > Would the sound card interface cable work better ?
> >
> > P.S. the CAT function worked for a little while but stopped
> > altogether.
> >
> > 73
> > Andreas Burkart
> > kg4pyp
> >
> >
> > ------------------------------------
> >
> > Yahoo! Groups Links
> >
> >
> >
> >
> >
> >
>
> --
> "You never change things by fighting the existing reality.
> To change something, build a new model that makes the
> existing model obsolete." -- Buckminster Fuller
>
> "First they ignore you, then they ridicule you, then they
> fight you, then you win" -- Gandhi

>
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>
>
>
>
>

--
"You never change things by fighting the existing reality.
To change something, build a new model that makes the
existing model obsolete." -- Buckminster Fuller

"First they ignore you, then they ridicule you, then they
fight you, then you win" -- Gandhi

3844. iPAQ PDA MDL 3650

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-12-04 17:24:59 UTC
From: Stephen Wandling
Topic: 3844 Message: 3844

Will this iPAQ suffice for digital mode operation with my ATS3B?

Thanks

72
Stephen
VE7NSD

--
"You never change things by fighting the existing reality.
To change something, build a new model that makes the
existing model obsolete." -- Buckminster Fuller

"First they ignore you, then they ridicule you, then they
fight you, then you win" -- Gandhi

3845. Re: [AT_Sprint] iPAQ PDA MDL 3650

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-12-04 17:45:38 UTC
From: Vojtěch Bubník
Topic: 3844 Message: 3845

> Will this iPAQ suffice for digital mode operation with my ATS3B?

I wonder what is the difference between 3630 and 3650. PocketDigi was developed mainly on iPaq 3630.
The biggest problem of the device is high backlight current and bad battery management. If you forget your device uncharged for an extended period of time, the battery will be undercharged and will deteriorate badly. Htere is a small slide switch on the bottom to disconnect battery if you are not going to use the device for months. Otherwise it is a reasonable device for the price.

Vojtech

3846. Wider audio on 3B - Anyone done it?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-12-04 18:15:20 UTC
From: mpupeza
Topic: 3846 Message: 3846

Hi,
I'd like a wider audio on my 3B! The narrow noise sounds almost like ringing to my ears, whereas I can tolerate my IC-703 at 500Hz bandwidth a lot better!
I know that Steve suggested that C5, C6, and C7 in the crystal filter 'could' be lowered for a wider response.
Has anyone tried this? What values worked best and what was the BW?
My 3B is about 200Hz at -6 dB presently!
The good part is that the caps are on the display side of the rig, so I can change them without as much hassle!
I'd have to order up some caps, so having an idea of values would be a big step ahead!
Thanks for any help.
73
Mike VE3EQP/W4 .....>

3847. Re: [AT_Sprint] Wider audio on 3B - Anyone done it?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-12-04 18:22:47 UTC
From: Vojtěch Bubník
Topic: 3846 Message: 3847

> I'd like a wider audio on my 3B! The narrow noise sounds almost like
> ringing to my ears, whereas I can tolerate my IC-703 at 500Hz bandwidth
> a lot better!
> Has anyone tried this? What values worked best and what was the BW?
> My 3B is about 200Hz at -6 dB presently!

I replaced the three caps with varactors and I tune bandwidth from zero to about 1.5kHz. At wider bandwidths the response is not flat. The minimum capacity is about 27pF at widest bandwidth.

If you want to get flat response at wider bandwidth, you would need to experiment with input and output termination also.

73, Vojtech OK1IAK

3848. Re: Wider audio on 3B - Anyone done it?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-12-05 01:59:48 UTC
From: mpupeza
Topic: 3846 Message: 3848

Vojteck;
If you were to select around 400-500 Hz bandwidth, and reasonably flat, what capacitors would you suggest for c5, c6 and c7?
I've ordered up a kit of SMD 805 Caps (and resistors) so should have the standard values. I was going to try 100 pF or the next smaller to start. I really just want to 'smooth' out the background noise, and am not a fanatic about narrow selectivity nor ultimate 'flatness'!
Thanks,
Mike VE3EQP/W4 .....>

--- In AT_Sprint@yahoogroups.com, Vojtìch Bubník <bubnikv@...> wrote:
>
> > I'd like a wider audio on my 3B! The narrow noise sounds almost like
> > ringing to my ears, whereas I can tolerate my IC-703 at 500Hz bandwidth
> > a lot better!
> > Has anyone tried this? What values worked best and what was the BW?
> > My 3B is about 200Hz at -6 dB presently!
>
> I replaced the three caps with varactors and I tune bandwidth from zero to about 1.5kHz. At wider bandwidths the response is not flat. The minimum capacity is about 27pF at widest bandwidth.
>
> If you want to get flat response at wider bandwidth, you would need to experiment with input and output termination also.
>
> 73, Vojtech OK1IAK
>

3849. Parts Supply

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-12-05 17:57:39 UTC
From: querencias
Topic: 3849 Message: 3849

San Diego Electronic Supply [http://www.sdelectronicsupply.com/] has a terrific inventory of
discrete components including SMD. He also is adept when finding substitutions.

He will mail the parts to anywhere in the world to which they can be delivered

all the best, Grant KT6L

3850. Wokstation at KT6L

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-12-05 20:09:53 UTC
From: querencias
Topic: 3850 Message: 3850

Just posted photos of the ATS work/maintenance station at KT6L. Located in the "reading/music/tv" room of the house, the paint pan and panavise make assembly/maintenance easier and more comfortable.

The green lead attached to the paint pan is connected to a dedicated 3 pin plug that helps to
reduce probability of static charge build-up and damage. It really helps a lot using a large
wattage "daylight" lamp and large magnifier. I've killed bigger fleas on my dog than some of
the resistors and caps on the "3B."

72 de KT6L

3851. NAQCC Sprint Tuesday night!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-12-07 23:29:28 UTC
From: NAQCC
Topic: 2905 Message: 3851

NAQCC Sprint Tuesday night!
This coming Tuesday evening will be the monthly NAQCC Sprint for December, 2008.

I will refer you to the proper URL:

http://www.usatek.net/~yoel/sprint200812.html

There you will find all the details as to time, frequencies and also a special prize.

This month's Special Award goes to the winner of a drawing among the highest scorers from each division who are able to make the word 'CHRISTMAS' from the calls of stations they work. Note: you only need to work one station with a letter "S" to get your two "Ss".

This is a monthly event that caters to the CW veteran, the CW newcomer, straight key and bug fans. All are welcome to participate (this includes QRO); but you must use QRP power levels to compete for awards.

Come join us and have a real good time!

73 de Dave VA3RJ
NAQCC #0004

3852. FS: iPAQ PDA

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-12-09 01:15:26 UTC
From: Gene N0MQ
Topic: 3852 Message: 3852

I have a nice iPAQ PDA for sale. I just put a new battery in it.
Price: $55.00 plus shipping.
72/73
Gene, N0MQ

3853. Next run of ATS3B's

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-12-12 21:02:21 UTC
From: kd1jv
Topic: 3853 Message: 3853

I'm working on it. Just ordered the main board today, next will be the filter boards. Then I guess I will have to start collecting the parts.

Since the guy who was making my boards went belly-up this summer, I had to find a new place to get boards made. That gave me an excuse to make some minor changes. I switched to using BS-170's for the PA, as they seem to be holding up well in the PFR-3 rigs. This change eliminated the need for the over current detector, so those parts have been taken out.

I was able to make room for 0805 resistors to replace the 0602 ones. No one seemed to have much trouble with the 0602 sized parts, but they were a pain. I also moved the LED display a little farther away from the switches.

That's all I could do. I know there was quite a list of things some of you wanted added to the rig, but those things are not possible without making the board larger, making the layout a nightmare and increasing the price. If anything, I wanted to make the price less, which I'm going to do. I hopeing for $175.00 in light of the current economic meltdown, assuming there are no suprises in the price of the rest of the parts.

I was thinking of cutting costs even more by eliminating the LED display (which would have allowed going back to a less expensive MPU) and going back to 4 bands instead of 6. But in the end, I decided that these cost cutting measures weren't worth it.

So, if your still waiting to get one of these rigs,(and since I belive there are more members in this group than the number of rigs made so far, thats a good bet), in about another month they should start to be ready.

72, Steve KD1JV

3854. ATS-3B #2 Up and Running

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-12-12 23:41:08 UTC
From: Jim Fraser
Topic: 3854 Message: 3854

Last month I finally got around to assembling my second 3B which came from the last run. I was having trouble with the solder paste from Cash Olsen being too dry so I bought some locally. Though it cost three times as much, I was able to get those nice little hershey drops of paste on the pads like in those videos on the web.

I did the board in five sections: the front side all at once, the back side in three sections. Then to complete I did all the backside semiconductors. Had the usual couple bridges on that IC with the close spaced pins! Touched-up some places where I did not use enough paste. All-in-all the hot air method was not too bad.

The biggest mistake I had was installing the reference oscillator backward. I found this during the initial checkout when I saw that I had no 3.3v. I ended up destroying it to remove it, obtained the part number from Steve, and got a replacement from Mouser. Once installed I got the friendly '8' greeting in the headphones and on the LED.

Today I did the calibration with no problems. I have not built the band modules yet, so I popped in the 20m module from my other 3B and heard some activity and registered a bit over 5 watts output into my NorCal Dummy Load, so the transmitter is working.

This second 3B is going to be a desktop version. I am waiting for the FCC-1 to become available again as it will be my frequency display. I will include an audio amp and speaker. I have built the rotary encoder in the files section for frequency tuning, but have not tried it yet. I also want to try and do externally attached band modules using edge card connectors.

Hopefully once it is all complete I can take some photos and post them.

3855. Re: [AT_Sprint] ATS-3B #2 Up and Running

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-12-12 23:53:56 UTC
From: Vojtěch Bubník
Topic: 3854 Message: 3855

Hi Jim.

> This second 3B is going to be a desktop version. I am waiting for the
> FCC-1 to become available again as it will be my frequency display.

I received a parcel from Mouser today with lot of parts for my next homebrewing. Among them there are some 3 digit LCD displays and bunch of 8bit shift registers. They will be used to build 3 digit display for my ATS-3b. Estimated price of all the parts at Mouser is about $2.60 for display and three 74VHC164M. The shift registers will be fed by the ATS's MCU. Additional current consumption will be less than one mA without backlight. If it works, it will be a blast.

73, Vojtech OK1IAK

3856. Re: [AT_Sprint] ATS-3B #2 Up and Running

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-12-13 00:12:31 UTC
From: Jim Larsen - AL7FS
Topic: 3854 Message: 3856

Vojtěch Bubník wrote:
If it works, it will be a blast.

If it works, I hope you will document it carefully and post it to the files section of the list. That would be great.

Thanks.

73, Jim
Jim Larsen
http://www.AL7FS.us/
Anchorage Alaska (907)345-3190

Vojtěch Bubník wrote:
> Hi Jim.
>
>> This second 3B is going to be a desktop version. I am waiting for the
>> FCC-1 to become available again as it will be my frequency display.
>
> I received a parcel from Mouser today with lot of parts for my next homebrewing. Among them there are some 3 digit LCD displays and bunch of 8bit shift registers. They will be used to build 3 digit display for my ATS-3b. Estimated price of all the parts at Mouser is about $2.60 for display and three 74VHC164M. The shift registers will be fed by the ATS's MCU. Additional current consumption will be less than one mA without backlight. If it works, it will be a blast.
>
> 73, Vojtech OK1IAK
>

3857. RE: [AT_Sprint] Next run of ATS3B's

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-12-13 14:26:51 UTC
From: Dale Putnam
Topic: 3853 Message: 3857

HI Steve,
Good to see you. One other addition to your list... us that have one of each of your designs....
and can't pass getting the next one too.. They each have their own personality and special place.
BTW, if you have someone that, say is a vet or physical reason for not being able to build your rig..
please feel free to pass along my name/call/address. I will build it for them, no charge.
Just happy to help them get a really nice radio, and be able to use the best.
Thank you,--... ...-- Dale - WC7S in Wy

_____
Suspicious message? There’s an alert for that.
http://windowslive.com/Explore/hotmail?ocid=TXT_TAGLM_WL_hotmail_acq_broad2_122008

3858. Re: [AT_Sprint] ATS-3B #2 Up and Running

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-12-13 16:07:02 UTC
From: Vojtěch Bubník
Topic: 3854 Message: 3858

Hi Jim.

> If it works, I hope you will document it carefully and post it to the files
> section of the list. That would be great.

The idea is to feed three 74HC164 8bit shift registers by two pins (data & clock). Only for clock an exclusive controller pin is needed, data pin may be shared with other devices, for example DDS. If backlight is needed, one needs other free controller pin.

LCD display needs to change polarity between backplane and all segments about 50x per second, otherwise the DC current will electrolyze the liquid crystals. This requires to feed the shift registers 50x per seconds. Not a problem for the ATS-3b controller. There will be some firmware changes necessary.

73, Vojtech OK1IAK

3859. Re: [AT_Sprint] ATS-3B #2 Up and Running

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-12-13 16:40:53 UTC
From: Vojtěch Bubník
Topic: 3854 Message: 3859

I forgot to attach the schematic. Here is a link.
http://www.kufr.cz/~ok1iak/HAM/ATS3b/ats3b-display.gif

> ------------ Původní zpráva ------------
> Od: Vojtěch Bubník <bubnikv@...>
> Předmět: Re: [AT_Sprint] ATS-3B #2 Up and Running
> Datum: 13.12.2008 17:10:14
> --
> Hi Jim.
>
> > If it works, I hope you will document it carefully and post it to the files
> > section of the list. That would be great.
>
> The idea is to feed three 74HC164 8bit shift registers by two pins (data &
> clock). Only for clock an exclusive controller pin is needed, data pin may be
> shared with other devices, for example DDS. If backlight is needed, one needs
> other free controller pin.
>
> LCD display needs to change polarity between backplane and all segments about
> 50x per second, otherwise the DC current will electrolyze the liquid crystals.
> This requires to feed the shift registers 50x per seconds. Not a problem for the
> ATS-3b controller. There will be some firmware changes necessary.
>
> 73, Vojtech OK1IAK
>
>
>

3860. Re: [AT_Sprint] ATS-3B #2 Up and Running

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-12-13 18:30:54 UTC
From: Jim Larsen - AL7FS
Topic: 3854 Message: 3860

Thanks for the info. I have carefully saved it. Now I just have to stop
being lazy and build my radio. :-)

73, Jim
Jim Larsen
http://www.AL7FS.us/
Anchorage Alaska (907)345-3190

Vojtěch Bubník wrote:
> Hi Jim.
>
>> If it works, I hope you will document it carefully and post it to the files
>> section of the list. That would be great.
>
> The idea is to feed three 74HC164 8bit shift registers by two pins (data & clock). Only for clock an exclusive controller pin is needed, data pin may be shared with other devices, for example DDS. If backlight is needed, one needs other free controller pin.
>
> LCD display needs to change polarity between backplane and all segments about 50x per second, otherwise the DC current will electrolyze the liquid crystals. This requires to feed the shift registers 50x per seconds. Not a problem for the ATS-3b controller. There will be some firmware changes necessary.
>
> 73, Vojtech OK1IAK
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>
>

3861. Re: Next run of ATS3B's

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-12-13 15:21:16 UTC
From: Annas Alamudi
Topic: 3853 Message: 3861

Steve,

Put me down as a potential buyer!

How does it work, though? Is there already a waiting list, or will it be first come, first serve from the day it becomes available?

Cheers!

Annas MM3YIA

3862. Re: Next run of ATS3B's

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-12-13 21:35:19 UTC
From: Bruce Beford
Topic: 3853 Message: 3862

--- In AT_Sprint@yahoogroups.com, "Annas Alamudi" <revolusi_rakyat@...>
wrote:
>
> Steve,
>
> Put me down as a potential buyer!
>
> How does it work, though? Is there already a waiting list, or will it
> be first come, first serve from the day it becomes available?
>
> Cheers!
>
> Annas MM3YIA
>
With Steve, it's always been "first come, first served". He does
not "do" waiting lists. It's just too much hassle to keep track of. He
also does not appreciate people sending money before something is
available.

Just stay tuned for further announcements.

-Bruce, N1RX

3863. Re: [AT_Sprint] Next run of ATS3B's

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-12-13 23:57:23 UTC
From: WA0ITP
Topic: 3853 Message: 3863

I love this radio stuff !
72, 73 Terry, WA?ITP
www.wa0dx.org/wa0itp
www.4sqrp.com
www.hams4u.com
www.qrpspots.com

----- Original Message -----
From: "kd1jv" <kd1jv@...>
To: <AT_Sprint@yahoogroups.com>
Sent: Friday, December 12, 2008 3:02 PM
Subject: [AT_Sprint] Next run of ATS3B's

> I'm working on it. Just ordered the main board today, next will be
> the filter boards. Then I guess I will have to start collecting the
> parts.
>
> Since the guy who was making my boards went belly-up this summer, I
> had to find a new place to get boards made. That gave me an excuse to
> make some minor changes. I switched to using BS-170's for the PA, as
> they seem to be holding up well in the PFR-3 rigs. This change
> eliminated the need for the over current detector, so those parts
> have been taken out.
>
> I was able to make room for 0805 resistors to replace the 0602 ones.
> No one seemed to have much trouble with the 0602 sized parts, but
> they were a pain. I also moved the LED display a little farther away
> from the switches.
>
> That's all I could do. I know there was quite a list of things some
> of you wanted added to the rig, but those things are not possible
> without making the board larger, making the layout a nightmare and
> increasing the price. If anything, I wanted to make the price less,
> which I'm going to do. I hopeing for $175.00 in light of the current
> economic meltdown, assuming there are no suprises in the price of the
> rest of the parts.
>
> I was thinking of cutting costs even more by eliminating the LED
> display (which would have allowed going back to a less expensive MPU)
> and going back to 4 bands instead of 6. But in the end, I decided
> that these cost cutting measures weren't worth it.
>
> So, if your still waiting to get one of these rigs,(and since I
> belive there are more members in this group than the number of rigs

> made so far, thats a good bet), in about another month they should
> start to be ready.
>
> 72, Steve KD1JV
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>

No virus found in this incoming message.
Checked by AVG - http://www.avg.com
Version: 8.0.176 / Virus Database: 270.9.17/1844 - Release Date: 12/11/2008 8:58
PM

3864. Heat Sinks

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-12-14 18:41:06 UTC
From: querencias
Topic: 3864 Message: 3864

Possibly off-topic:

I was wondering if there were more efficient heat sinks available that would help to protect
the PA in the ATS seriess - I remember seeing a derivation in one of my digital classes in college illustrating the heat build-up in a Pentium chip - the derivation and discussion took
over 15 minutes to show that over 1/2 the heat build-up was due to the capacitive reactance of the metal pads connected to the chip's silicon.

this is WAY over the top :

http://www.thetechlounge.com/view-image/cat-37/files/articles/174/images/097.jpg

72 de KT6L, Grant

3865. Re: Next run of ATS3B's

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-12-14 17:32:09 UTC
From: Annas Alamudi
Topic: 3853 Message: 3865

Bruce,

Thanks for the info and heads-up.

Cheers!

Annas MM3YIA
--- In AT_Sprint@yahoogroups.com, "Bruce Beford" <bruce.beford@...> wrote:

> With Steve, it's always been "first come, first served". He does
> not "do" waiting lists. It's just too much hassle to keep track of. He
> also does not appreciate people sending money before something is
> available.
>
> Just stay tuned for further announcements.
>
> -Bruce, N1RX
>

3866. Oscilloscope

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-12-14 22:51:18 UTC
From: BPCI@aol.com
Topic: 3866 Message: 3866

Does anyone have a suggestion for a good inexpensive beginners
oscilloscope to learn on??

Ci Jones, WU7R

-----Original Message-----
From: AT_Sprint@yahoogroups.com
To: AT_Sprint@yahoogroups.com
Sent: Sun, 14 Dec 2008 3:36 pm
Subject: [AT_Sprint] Digest Number 717

AT Sprint

Messages In This Digest (4 Messages)

1a.

Re: Next run of ATS3B's From: Bruce Beford

1b.

Re: Next run of ATS3B's From: WA0ITP

1c.

Re: Next run of ATS3B's From: Annas Alamudi

2.

Heat Sinks From: querencias

View All Topics | Create New Topic Messages

1a.

Re: Next run of ATS3B's

Posted by: "Bruce Beford" bruce.beford@... n1rx

Sat Dec 13, 2008 1:35 pm (PST)

--- In AT_Sprint@yahoogroups.com, "Annas Alamudi" <revolusi_rakyat@...>
wrote:
>
> Steve,
>
> Put me down as a potential buyer!
>
> How does it work, though? Is there already a waiting list, or will it

> be first come, first serve from the day it becomes available?
>
> Cheers!
>
> Annas MM3YIA
>
With Steve, it's always been "first come, first served". He does
not "do" waiting lists. It's just too much hassle to keep track of. He
also does not appreciate people sending money before something is
available.

Just stay tuned for further announcements.

-Bruce, N1RX

Back to top
Reply to sender | Reply to group | Reply v
ia web post
Messages in this topic (6)

1b.

Re: Next run of ATS3B's

Posted by: "WA0ITP" wa0itp@...m   otm74

Sat Dec 13, 2008 3:57 pm (PST)

I love this radio stuff !
72, 73 Terry, WAØITP
www.wa0dx.org/wa0itp
www.4sqrp.com
www.hams4u.com
www.qrpspots.com

----- Original Message -----
From: "kd1jv" <kd1jv@...>
To: <AT_Sprint@yahoogroups.com>
Sent: Friday, December 12, 2008 3:02 PM
Subject: [AT_Sprint] Next run of ATS3B's

> I'm working on it. Just ordered the main board today, next will be
> the filter boards. Then I guess I will have to start collecting the
> parts.
>
> Since the guy who was making my boards went belly-up this summer, I
> had to find a new place to get boards made. That gave me an excuse to
> make some minor changes. I switched to using BS-170's for the PA, as
> they seem to be holding up well in the PFR-3 rigs. This change
> eliminated the need for the over current detector, so those parts
> have been taken out.
>

> I was able to make room for 0805 resistors to replace the 0602 ones.
> No one seemed to have much trouble with the 0602 sized parts, but
> they were a pain. I also moved the LED display a little farther away
> from the switches.
>
> That's all I could do. I know there was quite a list of things some
> of you wanted added to the rig, but those things are not possible

> without making the board larger, making the layout a nightmare and
> increasing the price. If anything, I wanted to make the price less,
> which I'm going to do. I hopeing for $175.00 in light of the current
> economic meltdown, assuming there are no suprises in the price of the
> rest of the parts.
>
> I was thinking of cutting costs even more by eliminating the LED
> display (which would have allowed going back to a less expensive MPU)
> and going back to 4 bands instead of 6. But in the end, I decided
> that these cost cutting measures weren't worth it.
>
> So, if your still waiting to get one of these rigs,(and since I
> belive there are more members in this group than the number of rigs
> made so far, thats a good bet), in about another month they should
> start to be ready.
>
> 72, Steve KD1JV
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>

No virus found in this incoming message.
Checked by AVG - http://www.avg.com
Version: 8.0.176 / Virus Database: 270.9.17/1844 - Release Date:
12/11/2008 8:58
PM

Back to top
Reply to sender | Reply to group | Reply via web post
Messages in this topic (6)

1c.

Re: Next run of ATS3B's

Posted by: "Annas Alamudi" revolusi_rakyat@...   revolusi_rakyat

Sun Dec 14, 2008 1:19 pm (PST)

Bruce,

Thanks fo
r the info and heads-up.

Cheers!

Annas MM3YIA
--- In AT_Sprint@yahoogroups.com, "Bruce Beford" <bruce.beford@...>
wrote:

> With Steve, it's always been "first come, first served". He does
> not "do" waiting lists. It's just too much hassle to keep track of.
He
> also does not appreciate people sending money before something is
> available.
>
> Just stay tuned for further announcements.
>
> -Bruce, N1RX
>

Back to top
Reply to sender | Reply to group | Reply via web post
Messages in this topic (6)

2.

Heat Sinks

Posted by: "querencias" tuquerencia@...   querencias

Sun Dec 14, 2008 10:41 am (PST)

Possibly off-topic:

I was wondering if there were more efficient heat sinks available that
would help to protect
the PA in the ATS seriess - I remember seeing a derivation in one of my
digital classes in
college illustrating the heat build-up in a Pentium chip - the
derivation and discussion took
over 15 minutes to show that over 1/2 the heat build-up was due to the
capacitive reactance
of the metal pads connected to the chip's silicon.

this is WAY over the top :

http://www.thetechlounge.com/view-image/cat-37/files/articles/174/images/097.jpg

72 de KT6L, Grant

Back to top
Reply to sender | Reply to group | Reply via web post
Messages in this topic (1)

Recent
Activity

4

New Members

Visit Your Group

Sitebuilder

Build a web site

quickly & easily

with Sitebuilder.

Y! Groups blog

the best source

for the latest

scoop on Groups.

Everyday Wellness

on Yahoo! Groups

Find groups that will

help you stay fit.

Need to Reply?

Click one of the "Reply" links to respond to a specific message in the
Daily Digest.

Create New Topic | Visit Your Group on the Web

Messages | Files | Photos | Links | Database | Polls | Members |
Calendar

MARKETPLACE

From kitchen basics to easy recipes - join the Group from Kraft Foods

Change settings via the Web (Yahoo! ID required)
Change settings via email: Switch delivery to Individual | Switch
format to Traditional
Visit Your Group | Yahoo! Groups Terms of Use | Unsubscribe

3867. Re:[AT_Sprint] Oscilloscope

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-12-14 22:57:05 UTC
From: J. Haynes
Topic: 3866 Message: 3867

If you YouTube 'How to use an oscilloscope,' there's an excellent tutorial with real-world suggestions.
Jonathan KC7FYS

3868. Re: Next run of ATS3B's

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-12-15 13:20:03 UTC
From: j_aub
Topic: 3853 Message: 3868

Great news Steve, Cant wait to get hold of one! Loo forward to having
a radio in my laptop bag att the time ;)

Cheers,
James, M6JCA

--- In AT_Sprint@yahoogroups.com, "kd1jv" <kd1jv@...> wrote:
>
> I'm working on it. Just ordered the main board today, next will be
> the filter boards. Then I guess I will have to start collecting the
> parts.

3869. Re: [AT_Sprint] Re: Wider audio on 3B - Anyone done it?

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-12-15 15:38:45 UTC
From: Vojtěch Bubník
Topic: 3846 Message: 3869

Hi Mike.

Based on my yesterday's experience, I would recommend you to build in a simple attenuator. You will find details in a word document from Milan OK1IF in group Files section. A 9mm 1k pot from Alpha is easily available at Mouser and fits well. Probably lower resistance like 330 or 470 Ohm pots will be better, but they are harder to find.

I wondered why the SSB sounds so harsh with wide IF filter and wide AF filter. I was essentially unable to understand the voice. Now I know. Something somewhere got overloaded. It may be the first mixer, second mixer, AF preamp, the clipping diodes in AF preamp or the AF AVC circuit. Maybe one day I will find out, but right now I don't know how to do it :-)

It makes a great difference to get rid of the IMD, receiving is much more pleasant. Adding an attenuator pot is the single most useful mod to this tiny rig.

73, Vojtech OK1IAK

> ------------ Původní zpráva ------------
> Od: mpupeza <mpupeza@3dnorth.com>
> Předmět: [AT_Sprint] Re: Wider audio on 3B - Anyone done it?
> Datum: 05.12.2008 02:59:57
> --
> Vojteck;
> If you were to select around 400-500 Hz bandwidth, and reasonably flat,
> what capacitors would you suggest for c5, c6 and c7?
> I've ordered up a kit of SMD 805 Caps (and resistors) so should have
> the standard values. I was going to try 100 pF or the next smaller to
> start. I really just want to 'smooth' out the background noise, and am
> not a fanatic about narrow selectivity nor ultimate 'flatness'!
> Thanks,
> Mike VE3EQP/W4 .....>
>
>
> --- In AT_Sprint@yahoogroups.com, Vojtìch Bubník <bubnikv@...> wrote:
> >
> > > I'd like a wider audio on my 3B! The narrow noise sounds almost
> like
> > > ringing to my ears, whereas I can tolerate my IC-703 at 500Hz
> bandwidth
> > > a lot better!
> > > Has anyone tried this? What values worked best and what was the BW?
> > > My 3B is about 200Hz at -6 dB presently!
> >
> > I replaced the three caps with varactors and I tune bandwidth from
> zero to about 1.5kHz. At wider bandwidths the response is not flat. The
> minimum capacity is about 27pF at widest bandwidth.

> >
> > If you want to get flat response at wider bandwidth, you would need
> to experiment with input and output termination also.
> >
> > 73, Vojtech OK1IAK
> >
>
>
>
>
>

3870. ATS3 Vs. Orion II

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-12-16 05:30:24 UTC
From: dyarnes1
Topic: 3870 Message: 3870

I was playing around (on a very noisy and barren 40 meter band) today, and decided to pull out my ATS3. That little rig hasn't had a workout for a few months now. Anyway, I was able to snag a couple of QSO's, with pretty decent reports too! Then I just listened around the band for about 30 minutes, and began comparing signal strengths between the ATS3 and my Orion II, using the same antenna. One station I ran across was particularly difficult to hear in the noise using the Orion II. When I switched over to the ATS3, I could actually copy that station better! Perhaps I was getting less noise in the ATS3 by running it off battery power, but it definitely could hear better. It was almost a matter of copying and not copying, since I wasn't really able to consistently hear the other station on the Orion II. This wasn't a very scientific comparison, but it certainly tells me that the ATS3 is a darn good little rig, and doesn't need to have many excuses given for it on receive.

I have two of these versions now, and I left one up in Oregon with my motorhome. I also have an ATS3B kit, which still needs to be built. I've been sidetracked multiple times from getting that done. I really enjoy pulling this thing out of my pocket at the ham breakfast gatherings. It's a real "gee whiz" type rig, which gets lots of scrutiny, but the best part is that it is a very serious radio! I think I just confirmed that, for the nth time, with my "A/B" test today with the Orion II. Next I'm going to try the same thing with my K3!

Dave W7AQK

3871. 3 digit lcd display prototype

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-12-17 04:21:00 UTC
From: Vojtěch Bubník
Topic: 3871 Message: 3871

Hi gang.

I wired the display on a piece of thin no copper laminate board with magnet wire. The circuit consists of three 74vhc164 shift registers and one schmitt trigger to clean up clock. The schematic is very much the same I already posted, only the schmitt trigger is missing. The total price for the display and shift registers was about $3.
http://ns.kufr.cz/~ok1iak/HAM/ATS3b/ats3b-display.gif

The faster shift registers (74vhc164, not 74hc164) were 2 cents cheaper at Mouser, so I ordered them, which was a big mistake. ATS controller generates too slow clock edges for these 130MHz capable chips. I had to clean the clock up with one schmitt trigger. I learned my lesson in digital circuits. I believe it would work without the schmitt trigger if one uses the regular slow 74hc164 chips.

Here is a short video (700kB) showing power on/off, frequency display and progressive tuning with the rotary encoder.
http://ns.kufr.cz/~ok1iak/HAM/ATS3b/ats3b-lcd-display.wmv

And here is one screenshot from the movie.
http://ns.kufr.cz/~ok1iak/HAM/ATS3b/ats3b-display.jpg

The display has no backlight, but lighting it up from the rear side through the laminate board with 3 LEDs using 10mA at 5V works reasonable, even though the backlight is not even without a good diffuser.

73, Vojtech OK1IAK

3872. OK1IF Attenuator Mod. Works Nice.

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-12-19 09:58:36 UTC
From: kc7fys
Topic: 3872 Message: 3872

I stumbled across a pretty nice little 500K pot and mounted it next to the antenna jack in my 3B. Thanks, Vojtech for pointing out this easy mod. http://www.flickr.com/photos/jonathancharles/3119483921/
Photos and comments there.
Thanks and 73,
Jonathan KC7FYS
PS. I'll be stateside over the holidays and will try to get on the air mobile. Hope to run into other ATS rigs on the QRP freqs.

3873. Run for the Bacon, 12/21/2008, 6:00 pm

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-12-22 01:40:21 UTC
From: AT_Sprint@yahoogroups.com
Topic: 3873 Message: 3873

Reminder from: AT_Sprint Yahoo! Group
http://groups.yahoo.com/group/AT_Sprint/cal

Run for the Bacon
Sunday December 21, 2008
6:00 pm - 8:00 pm
(This event repeats every month on the third Sunday.)
Location: Your shack or anywhere

Notes:
This Sunday evening, the Flying Pigs Amateur Radio Club International will be holding its monthly Run For The Bacon. This is a friendly, two hour QRP CW Sprint, which is open to ALL radio amateurs, will last from 9:00 - 11:00PM EDT (0200-0400 UTC Monday).

You may work stations once per band on 160, 80, 40, 20, 15 or 10 Meters. Suggested starting frequencies are 1.812, 3.562, 7.044, 14.062, 21.062, and 28.062 MHz.

The exchange is RST, S/P/C (State, Province, Country) and Flying Pigs membership number. If you're not a member of the Flying Pigs, and would like to be; then please cli

All Rights Reserved
Copyright ? 2008
Yahoo! Inc.
http://www.yahoo.com

Privacy Policy:
http://privacy.yahoo.com/privacy/us

Terms of Service:
http://docs.yahoo.com/info/terms/

3874. FW: Thank You!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-12-22 19:13:36 UTC
From: Dale Putnam
Topic: 3874 Message: 3874
Attachments: 2 described; binary payloads are missing from this source WARC

Hmmm? Would you happen to know anything about this? *G*
--... ...--
Dale - WC7S in Wy

To: daleputnam@...: kbreen@...: Thank You!Date: Mon, 22 Dec 2008 12:42:24 -0500

Thank You !!!
Thank you for renewing your membership with the ARRL – the national association for Amateur Radio!
You will receive your membership card within the next few weeks. As a reminder, here is your ARRL Membership ID# 0007072624 which you can use to access the Members Only website. If at any time you need to update your information for your QST delivery, please contact us at circulation@arrl.org.
Thank you for making an important decision today – to renew your membership. Each and every member is important and relevant – please know that your choice to renew helps to support the vital programs, services, education and advocacy all on behalf of Amateur Radio.
Thank you again for renewing your membership. On behalf of the Board of Directors, volunteers and staff, Thank You!
Many 73s,

Katie Breen, W1KRBMembership Manager

225 Main Street, Newington, CT 06111-1494 USA860-594-0200 or Toll-Free 1-888-277-5289

Questions? call: 1-888-277-5289 or e-mail: membership@...

Send e-mail anywhere. No map, no compass.
http://windowslive.com/oneline/hotmail?ocid=TXT_TAGLM_WL_hotmail_acq_anywhere_122008

3875. Re: FW: Thank You!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-12-22 23:11:10 UTC
From: Bruce Beford
Topic: 3874 Message: 3875

--- In AT_Sprint@yahoogroups.com, Dale Putnam <daleputnam@...> wrote:
>
>
> Hmmm? Would you happen to know anything about this? *G*
> --... ...--
> Dale - WC7S in Wy
>
>

Wasn't me Dale... Did Santa renew your membership?

72/73, -Bruce, N1RX

3876. RE: [AT_Sprint] Re: FW: Thank You!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-12-22 23:39:36 UTC
From: Dale Putnam
Topic: 3874 Message: 3876

Well, now you know that you are in my address book, adjacent to my bride, Betsy....
Sorry for the mis-address.
And yes, Santa is alive and well... pretty cool too.
Merry Christmas!--... ...--Dale - WC7S in Wy_____> To: AT_Sprint@yahoogroups.com> From: bruce.beford@verizon.net> Date: Mon, 22 Dec 2008 23:11:10 +0000> Subject: [AT_Sprint] Re: FW: Thank You!>>>>>>>>>>>>>>>>>>>>> --- In AT_Sprint@yahoogroups.com, Dale Putnam wrote:>> >>> >>> > Hmmm? Would you happen to know anything about this? *G*>> > --... ...-->> > Dale - WC7S in Wy>> >>> >>>>> Wasn't me Dale... Did Santa renew your membership?>>>> 72/73, -Bruce, N1RX>>>>>>>> >>>>>>>>>>

Send e-mail faster without improving your typing skills.
http://windowslive.com/online/hotmail?ocid=TXT_TAGLM_WL_hotmail_acq_speed_122008

3877. RE: [AT_Sprint] Re: FW: Thank You!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-12-23 00:37:48 UTC
From: Dohn
Topic: 3874 Message: 3877

This is probably one of the most bizarre notes I have seen in some time. I have no idea what this was about.

From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com] On Behalf Of Dale Putnam
Sent: Monday, December 22, 2008 6:40 PM
To: AT Sprint
Subject: RE: [AT_Sprint] Re: FW: Thank You!

Well, now you know that you are in my address book, adjacent to my bride, Betsy....
Sorry for the mis-address.
And yes, Santa is alive and well... pretty cool too.
Merry Christmas!

--... ...--
Dale - WC7S in Wy

> To: AT_Sprint@yahoogroups.com
> From: bruce.beford@...
> Date: Mon, 22 Dec 2008 23:11:10 +0000
> Subject: [AT_Sprint] Re: FW: Thank You!
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>

> --- In AT_Sprint@yahoogroups.com, Dale Putnam wrote:
>
> >
>
> >
>
> > Hmmm? Would you happen to know anything about this? *G*
>
> > --... ...--
>
> > Dale - WC7S in Wy
>
> >
>
> >
>
>
>
> Wasn't me Dale... Did Santa renew your membership?
>
>
>
> 72/73, -Bruce, N1RX
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>

Send e-mail faster without improving your typing skills. Get your Hotmail
<http://windowslive.com/online/hotmail?ocid=TXT_TAGLM_WL_hotmail_acq_speed_1
22008> R account.

3878. Thank yhou

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-12-23 01:16:45 UTC
From: Dale Putnam
Topic: 3878 Message: 3878

I'm rather embarassed to admit this, but it seems that the question, was originally intended for my wife, actually went to a few other folks, the response to their kind reply went to this list... How that happened, is still under investigation. However, I apolgize for the inconvenience, and... being oppurtunistic,
Wish everyone, a very Merry Christmas, and a Better New Year!!

--... ...--
Dale - WC7S in Wy

_____
It’s the same Hotmail®. If by “same” you mean up to 70% faster.
http://windowslive.com/online/hotmail?ocid=TXT_TAGLM_WL_hotmail_acq_broad1_122008

3879. Re: [AT_Sprint] Thank yhou

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-12-23 01:20:58 UTC
From: Alan Biocca
Topic: 3878 Message: 3879
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

3880. RE: [AT_Sprint] Thank yhou

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-12-23 01:24:52 UTC
From: Dohn
Topic: 3878 Message: 3880

Merry Christmas to you and "yours" LOL Have a nice Holiday.

Dohn N8EWY

From: AT_Sprint@yahoogroups.com [mailto:AT_Sprint@yahoogroups.com] On Behalf Of Dale Putnam
Sent: Monday, December 22, 2008 8:17 PM
To: AT Sprint
Subject: [AT_Sprint] Thank yhou

I'm rather embarassed to admit this, but it seems that the question, was originally intended for my wife, actually went to a few other folks, the response to their kind reply went to this list... How that happened, is still under investigation. However, I apolgize for the inconvenience, and... being oppurtunistic,
Wish everyone, a very Merry Christmas, and a Better New Year!!

--... ...--
Dale - WC7S in Wy

It's the same HotmailR. If by "same" you mean up to 70% faster. Get your account now.
<http://windowslive.com/online/hotmail?ocid=TXT_TAGLM_WL_hotmail_acq_broad1_122008>

3881. Re: FW: Thank You!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-12-23 03:53:10 UTC
From: Jim Fraser
Topic: 3874 Message: 3881

Seems strange you would receive this with todays date. You see Katie Breen (W1KRB) was the previous ARRL Membership Manager. She left ARRL effective Oct 1, 2008 to get married and move to Wyoming.

Jim K6JF

--- In AT_Sprint@yahoogroups.com, Dale Putnam <daleputnam@...> wrote:
>
>
> Hmmm? Would you happen to know anything about this? *G*
> --... ...--
> Dale - WC7S in Wy
>
>
>
> To: daleputnam@...: kbreen@...: Thank You!Date: Mon, 22 Dec 2008 12:42:24 -0500
>
>
> Thank You !!!
> Thank you for renewing your membership with the ARRL ☐ the national association for Amateur Radio!
> You will receive your membership card within the next few weeks. As a reminder, here is your ARRL Membership ID# 0007072624 which you can use to access the Members Only website. If at any time you need to update your information for your QST delivery, please contact us at circulation@...
> Thank you for making an important decision today ☐ to renew your membership. Each and every member is important and relevant ☐ please know that your choice to renew helps to support the vital programs, services, education and advocacy all on behalf of Amateur Radio.
> Thank you again for renewing your membership. On behalf of the Board of Directors, volunteers and staff, Thank You!
> Many 73s,
>
>
> Katie Breen, W1KRBMembership Manager
>
>
>
>
>
>
>
> 225 Main Street, Newington, CT 06111-1494 USA860-594-0200 or Toll-

Free 1-888-277-5289
>
> Questions? call: 1-888-277-5289 or e-mail: membership@...
> _____
> Send e-mail anywhere. No map, no compass.
> http://windowslive.com/oneline/hotmail?
ocid=TXT_TAGLM_WL_hotmail_acq_anywhere_122008
>

3882. RE: [AT_Sprint] Re: FW: Thank You!

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-12-23 12:58:37 UTC
From: Dale Putnam
Topic: 3874 Message: 3882

Hi Jim,
One the one hand, the message was to go to my bride, on the other.... I am confused a bit, because I thought Katie had left the ARRL, and you just confirmed it... so... I guess I will wait, but not with baited breath, for a card....
Merry Christmas,--... ...-- Dale - WC7S in Wy

To: AT_Sprint@yahoogroups.comFrom: jimf53@...: Tue, 23 Dec 2008 03:53:10 +0000Subject: [AT_Sprint] Re: FW: Thank You!

Seems strange you would receive this with todays date. You see Katie Breen (W1KRB) was the previous ARRL Membership Manager. She left ARRL effective Oct 1, 2008 to get married and move to Wyoming.Jim K6JF--- In AT_Sprint@yahoogroups.com, Dale Putnam <daleputnam@...> wrote:>> > Hmmm? Would you happen to know anything about this? *G*> --... ...-- > Dale - WC7S in Wy> > > > To: daleputnam@...: kbreen@...: Thank You!Date: Mon, 22 Dec 2008 12:42:24 -0500> > > Thank You !!!> Thank you for renewing your membership with the ARRL – the national association for Amateur Radio!> You will receive your membership card within the next few weeks. As a reminder, here is your ARRL Membership ID# 0007072624 which you can use to access the Members Only website. If at any time you need to update your information for your QST delivery, please contact us at circulation@...> Thank you for making an important decision today – to renew your membership. Each and every member is important and relevant – please know that your choice to renew helps to support the vital programs, services, education and advocacy all on behalf of Amateur Radio.> Thank you again for renewing your membership. On behalf of the Board of Directors, volunteers and staff, Thank You!> Many 73s,> > > Katie Breen, W1KRBMembership Manager> > > > > > > 225 Main Street, Newington, CT 06111-1494 USA860-594-0200 or Toll-Free 1-888-277-5289> > Questions? call: 1-888-277-5289 or e-mail: membership@... >
_____> Send e-mail anywhere. No map, no compass.>
http://windowslive.com/oneline/hotmail?ocid=TXT_TAGLM_WL_hotmail_acq_anywhere_122008>

_____
It’s the same Hotmail®. If by “same” you mean up to 70% faster.
http://windowslive.com/online/hotmail?ocid=TXT_TAGLM_WL_hotmail_acq_broad1_122008

3883. Troubleshooting ATS3B - dj8ef

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-12-27 16:28:12 UTC
From: "Dr. György-Kiss, Franz"
Topic: 3883 Message: 3883

Hallo Forum Members,
My first Projekt ATS3A was not at all Problem. Very fine 4 band TRX!

I bilt my ATS3B (second Kit Serie Revisited Sept 16. 2007.) and I have
same troubles:
Check out and Calibration is OK!
Wire up with current limited supply. I had Modifikation down (22K
across the leads of C58!)
Reference Oscillator Frequency Calibration is OK!
Local Oscillator frequency trim with Oscilloscope OK
TP1 : 3,99V
The PA gates are at 0v. OK
All Band filter is OK, Rx input trimmers for the best Signal.
Power up : the Rig LED Diplay and Headfpones Tone OK in all Band's!

With my limited Supply and send with the paddle from 9V back to 4,5V and
ca. 180 mA! -but Powermeter : less Power! -and not 2,5 Watt!

With my unlimited (20A!) Supply LED display appears: "E"!!
-it is goes out with the Menu switch!

If I with one little screwdriver touch/contact the Programming Option
Pin RST, or Q5 collector or R43 the LED displays "E"!! It is Normal?
I had the IC Voltage tables in recive mode tested: OK!!!!

R 47 is 680Ohm OK!
R49 is 470 Ohm OK
R48 is 0,1 OHM OK!
R43 47 K OK!
D4 5,1 V Zener is OK!

This is very frustrating. Any suggestions would be greatly
appreciated. I'm sure it's something simple, but I don't NO where!

Wishing everyone happy new year 2009!

73 Dx Feri dj8ef n8ef ha8cw

3884. Re: [AT_Sprint] Troubleshooting ATS3B - dj8ef

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-12-28 05:14:58 UTC
From: Michael Harnage
Topic: 3883 Message: 3884

Read Carey's post in the link below, especially the part about R47 in the 9th paragraph.

http://groups.yahoo.com/group/AT_Sprint/message/1984

Also, make sure to use less that 12V power supply.

It sounds like your rig may be working FB...

-mike/w1mt

--- On Sat, 12/27/08, "Dr. György-Kiss, Franz" <gyokife@...> wrote:

>
> With my unlimited (20A!) Supply LED display appears:
> "E"!!
> -it is goes out with the Menu switch!

3885. Re: Troubleshooting ATS3B - dj8ef

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-12-29 01:00:18 UTC
From: radio_kx0r
Topic: 3883 Message: 3885

--- In AT_Sprint@yahoogroups.com, "Dr. György-Kiss, Franz" <gyokife@...> wrote:

Feri/Franz,

Many of us have had problems like what you describe.

One idea is to test your rig with a resistor in series with your power supply. This will limit the current. If you use a 12V supply, please try a resistor greater than 5 ohms and less than 7 ohms, in series with the positive lead.

The reduced voltage and current may allow you to tune up the rig without tripping the overcurrent sensor. If your ATS-3B runs OK with the series resistor, we will know that most of the functions are OK.

Please connect an accurate 50 ohm dummy load resistor to your ATS-3B rig for all tests. If your load is not 50 ohms, the rig may draw excess current and trigger the overcurrent sensor, which will cause it to show a letter "E" and stop normal operation.

I normally run my ATS-3B with 3 lithium ion cells, about 12.4V fully charged. I have a switch on the battery pack to add a 6.7 ohm resistor in series with the battery. This makes it easy to tune my tuner safely, and it prevents the overcurrent trip problem.

The ATS rigs need a good 50-ohm load. A good match is essential. Usually this means that some type of tuner with a match indicator is required.

If you operate your ATS-3B with a 12V power supply into a mismatch with SWR of 1.5 or greater, and the mismatch is due to an impedance lower than 50 ohms, the final mosfets will draw excess current, and the rig will trip out, and you will see a letter "E" when this happens. Usually this is very fast!

There are two parts to the answer for this problem:

1) Use a series resistor at first, to reduce the current and voltage

2) Use a matching circuit (tuner) adjusted for an accurate match.

Once the match is adjusted correctly, you may be able to run at full power.

Please make sure that your filter modules are correctly adjusted, since they may cause your rig to draw excess currect even with a 50 ohm load.

Please see the FILES section on this website. There you can find my paper that explains how to adjust the filter modules for maximum output and good efficiency.

You may also choose to increase the current limit slightly, as explained in my older post that Mike referenced.

I have been very pleased with this rig. It works well for portable operation and has enabled me to operate from amazing places in the mountains near here.

72/73

Carey
KX0R

> Hallo Forum Members,
> My first Projekt ATS3A was not at all Problem. Very fine 4 band TRX!
>
> I bilt my ATS3B (second Kit Serie Revisited Sept 16. 2007.) and I have
> same troubles:
> Check out and Calibration is OK!
> Wire up with current limited supply. I had Modifikation down (22K
> across the leads of C58!)
> Reference Oscillator Frequency Calibration is OK!
> Local Oscillator frequency trim with Oscilloscope OK
> TP1 : 3,99V
> The PA gates are at 0v. OK
> All Band filter is OK, Rx input trimmers for the best Signal.
> Power up : the Rig LED Diplay and Headfpones Tone OK in all Band's!
>
> With my limited Supply and send with the paddle from 9V back to 4,5V and
> ca. 180 mA! -but Powermeter : less Power! -and not 2,5 Watt!
>
> With my unlimited (20A!) Supply LED display appears: "E"!!
> -it is goes out with the Menu switch!
>
> If I with one little screwdriver touch/contact the Programming Option
> Pin RST, or Q5 collector or R43 the LED displays "E"!! It is Normal?
> I had the IC Voltage tables in recive mode tested: OK!!!!
>
> R 47 is 680Ohm OK!
> R49 is 470 Ohm OK
> R48 is 0,1 OHM OK!
> R43 47 K OK!
> D4 5,1 V Zener is OK!
>
> This is very frustrating. Any suggestions would be greatly
> appreciated. I'm sure it's something simple, but I don't NO where!

>
> Wishing everyone happy new year 2009!
>
> 73 Dx Feri dj8ef n8ef ha8cw
>

3886. ATS3A Blown MPU

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-12-29 03:15:21 UTC
From: k2qpn
Topic: 3886 Message: 3886

Tonight my ATS3A quit working. No beeps only some hum. The 3.3V was zilch and the regulator was hot. The 3.3V was 6 ohms to ground. By lifting pin 2 of the MPS430 MPU the 3.3V returns. Looks like the MPU is blown.

Can I get a replacement with the stock code loaded? Can I just get a replacement and load the code myself? Is the stock code available? Is there a primer for the code load novice (like me)?

This on the same weekend that I sent my PFR3 chip back to Steve for reprogramming. I am QRPless.

73, Bob K2QPN

3887. Re: ATS3A Blown MPU

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-12-29 14:18:00 UTC
From: k2qpn
Topic: 3886 Message: 3887

As a follow up. Got info on programming. Still need a source for the original firmware. I found 2 MPUs for sale - MSP430F1121AIDW and MSP430F1121AIPW. Which one do I need??

73, Bob K2QPN

--- In AT_Sprint@yahoogroups.com, "k2qpn" <K2QPN@...> wrote:
>
> Tonight my ATS3A quit working. No beeps only some hum. The 3.3V was
> zilch and the regulator was hot. The 3.3V was 6 ohms to ground. By
> lifting pin 2 of the MPS430 MPU the 3.3V returns. Looks like the MPU
> is blown.
>
> Can I get a replacement with the stock code loaded? Can I just get a
> replacement and load the code myself? Is the stock code available? Is
> there a primer for the code load novice (like me)?
>
> This on the same weekend that I sent my PFR3 chip back to Steve for
> reprogramming. I am QRPless.
>
> 73, Bob K2QPN
>

3888. DSW-II

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-12-30 01:54:58 UTC
From: Kurt Savegnago
Topic: 3853 Message: 3888

Hello Steve,

Kurt Savegnago here. Received the radio in good order. Am going to whip up a fused power cable right away to prevent that accident from happening again. Thanks again.

Kurt Savegnago KC9LDH

3889. Wanted Multiband CW qrp rig For XO Laptop *** Contact Directly****

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2008-12-31 00:06:39 UTC
From: kb2sdrjay
Topic: 3889 Message: 3889

I have an XO Laptop that is one year old and in good condition, I am looking for a multiband qrp rig to trade. The xo will come with the latest OS, I will also include Fldigi. I will furnish picture on request..

See the below website for more info on the laptop.

http://www.laptop.org/en/laptop/hardware/index.shtml

Please contact me at kb2sdrjay@...

73
Jason
KB2SDR

6481. Re: [AT_Sprint] Re: Russia on 2W...

Yahoo group: AT_Sprint (2002 — 2008)
Date: 2002-01-01 09:26:37 UTC
From: asfco
Topic: 6475 Message: 6481

I would take one of those
72
John w2gb

----- Original Message -----
From: c.gondard
To: AT_Sprint@yahoogroups.com
Sent: Sunday, September 26, 2010 1:07 PM
Subject: [AT_Sprint] Re: Russia on 2W...

Hello
The rotary encoder was designed by Miroslav from Czeck land. All details are on :
http://diy4fun.blogspot.com/
Miroslav told me today that , presentely, all the kits are sold
He will perheaps launch a second batch of kits in a near future .
73 de christian / F6FTB

--- In AT_Sprint@yahoogroups.com, Dave-K7DAA <dave@...> wrote:
>
> Pardon my ignorance, but available from who/where?
>
> I've seen a couple of pictures, and just assumed somebody went to a
> lot of trouble to do a one-off addition. Didn't it also involve new
> code in the microprocessor as well?
>
> Thanks in advance for the info,
>
> Dave - K7DAA
>
> On Sep 23, 2010, at 1:49 PM, Jonathan wrote:
>
> >
> > The rotary encoder is still available as far as I know--and it works
> > real dandy.
> > Nice DX.
> > Jonathan KC7FYS
> >
> >
> > From: russellhulett <rhulett1@...>
> > To: AT_Sprint@yahoogroups.com
> > Sent: Thu, September 23, 2010 3:42:18 PM
> > Subject: [AT_Sprint] Russia on 2W...
> >
> >
> > Its been awhile since have used the ATS-3B, so hooked it up today to
> > give it a spin. Found 15M "open" and answered RA3EG's CQ DX.

> > Surprisngly he gave a 559 to my 2W signal, probably just the generic
> > RST. Still, was fun.
> >
> > I still don't care for the pushbutton tuning, but guess nothing is
> > perfect.
> >
> > 73, Curt KB5JO
> >
> >
> >
> >
>